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THE TREATMENT OF CARCINOMA OF THE CERVIX.*

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Cancer of the uterine cervix, as elsewhere, is extremely refractory to all therapy. However, with the advent of radium some two decades ago the interest in this disease has been greatly enhanced and the cure rate increased in the early cases, as well as definite and prolonged palliation secured in the more advanced, in a manner incomparable with any former treatment. Whether or not cancer actually is on the increase I cannot assert from my personal experience, but the statistical reports from Life Insurance Companies and the Boards of Health as to the causes of death unquestionably reveal a marked increase in its incidence; eight years ago it stood eighth as the cause of death, while today it has climbed up to second in rank. This doubtless, in part at least, is due to the intensive educational campaign of the American Society for the Control of Cancer and the concomitant education of our physicians themselves, whose diagnostic wits have been greatly sharpened, but that certainly does not explain it all. We know it is not hereditary, nor contagious nor infectious.

The essential factor for the public as well as for the physician to recognize is that a cancer, wherever it arises in the body, is primarily a local disease, curable if properly treated in this stage. The cause of cervical cancer, as of cancer in general, as yet is utterly unknown, though we believe not unknowable. The importance of surgical prophylaxis in the treatment of tears, ulcers and infections undoubtedly will reduce the incidence of this disease. We must not forget that it occurs, though but rarely, in women who never have been pregnant. It is well known to be common in the Negro race, while among the Jews, who likewise bear many children, it is rare.

Watery and bloody vaginal discharges, about or after the menopause, are associated with the notion of malignancy, not only in the minds of many doctors but of most women. In spite of this, as well as the knowledge that the one hopeful time to treat cancer is in its very incipiency, it is nevertheless true that a distressingly large proportion of these patients first applies for aid in the advanced stage of the disease. Large clinics report far less than 50 per cent as operable when first seen; at our own clinic, where all work is referred, this percentage is even smaller.

A most important factor relating itself to the treatment is an accurate history and a careful examination and complete study of each case. Pain in the pelvis, back or legs, associated with a bloody vaginal discharge, not only suggests a cancer but an advanced stage. Disturbance of either rectal or bladder function is as a rule a bad omen. Any complicating disease should be noted and its relation to the proposed treatment carefully considered. Attention ought always to be given to the blood; a Wassermann should be made, for, while we do not know that syphilis is a factor in the cause of cancer, it is often an associated condition. Especial attention should be paid to the function of the kidneys. As a rule extension of the growth does not advance above the pelvic brim, remaining local and spreading by continuity with a resulting constriction of the ureters, interfering with their drainage. The cause of death usually is due not so much to the cachexia with absorption from the growth as to the complicating uremia and pyonephrosis.

If, after palpating through the abdomen and discovering no mass of any kind, we introduce the finger into the vagina for an examination of its walls, the cervix and the pelvic structures, we are apt to discover at once any obviously bleeding, indurated or friable cervix, which declares itself in no uncertain tones to be an indubitable cancer. Let me insist also on the importance of a bimanual

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recto-abdominal investigation as the avenue by which we can best determine the exact condition of the lateral structures from uterus out to pelvic walls. In advanced disease a cystoscopic or proctoscopic examination may be indicated to complete the protocol. In each and every instance a clipping should be secured for the microscope. Anesthesia is not necessary to this end; I cannot conceive of any valid basis for the belief that this act can in any way disseminate the disease. There is a variety of other conditions of the cervix easily and often mistaken for cancer; such are erosions, tuberculosis, granuloma, lues or even sarcoma. A necrotic cervical or uterine polyp is occasionally mistaken for cancer; I have seen a number of such among my referred cases where the microscopic picture clarified the situation and turned gloom into joy.

Carcinoma of the cervix presents itself in three types: (1) Basal cell, originating in the columnar epithelium of the cervical canal; (2) epidermoid or squamous cell, springing from the modified skin of the portio vaginalis; this is further divided into the spinal, spindle and transitional cell cancer; (3) adenocarcinoma, arising primarily in the uterine glands and involving the cervix by downward extension.

From a prognostic standpoint based on a histological grading I am not altogether in accord with Dr. A. C. Broders or Dr. W. P. Healey at the Memorial Hospital in New York, for we often have seen extensive metastases in Grade 1, while some of Grade 4 have long continued to remain local. This is also observable in carcinomata of the uterine body and in bladder tumors.

Prior to treatment the cases may be classified as: (1) Early, when the growth is localized entirely in or on the cervix; (2) borderline, when the growth involves the adjacent vaginal wall or the parametrium but is still freely movable on bimanual palpation; (3) advanced or totally inoperable extensive cervical growth and fixation of one or both parametria.

An arbitrary period of five years' freedom from cancer after surgical removal is commonly taken as indicating a permanent cure. Recurrences, however, do take place, though rarely, from the sixth year or at any time as long as life lasts. We must not, however, belittle the importance of all apparent absence of disease for four years, or even two or three.

My own position is: The surgical removal in early cases, preeminently operable, offers a low mortality with a substantial permanent cure rate; a moderate involvement of the parametria and vaginal wall increases the surgical mortality rate considerably, with a rate of cure decidedly diminished; in the more extensive types there are no operative cures. Radium in the early cases offers a decidedly larger number of permanent cures. In the border-line group the percentage of short clinical radium cures is very high and the permanent cures are far more numerous than by the best operation ever devised. In the still more extensive cases with radium there is an encouraging percentage of immediate relief which may last for months or years, and there are even some cures. In the extreme or far advanced, while clinical or permanent cures are rarities, palliation and relief of hemorrhage and pain are to be expected. To quote percentages from the Howard A. Kelly Hospital, we have secured the following with radium: Very early cases, 50 per cent; borderline 31 per cent; in the inoperables, 9 per cent; in a hitherto hopeless group, namely, those recurrent after operation, 10 per cent.

The combination of operative removal and radium topical applications as a preliminary would seem a sound procedure in the early operables. We have not found that this increases the permanent cure rate but do know that radiation adds to the difficulties of the operating. Immediate local post-operative radiation is hardly to be recommended; indeed, it may even be dangerous, as there is the risk of a vaginal slough or even of involving a loop of some adjacent bowel, productive of a fistula. Wide portal X-ray has not increased our permanent results and I believe it is not to be used here except as a palliative for the more advanced types. Where an apparent cure follows radium therapy, a subsequent radical hysterectomy seems to be a mistake.

It is impossible to lay down precise rules for the radiation of all the various extensions of cervical cancer. A distinguished foreign visitor recently told us that he employed a fixed technique in all alike, whether early or late. Our own opinion is that each case should be studied as a separate entity, and that an immensely greater dosage is called for by the advanced cases. We now secure higher percentages of cures in the early cases than a decade

ago, and the limits of curability are being pushed forward in the more advanced, including many formerly regarded as only palliative. In a word, the technique of the treatment of cancer of the cervix is not a closed book but a vital and constantly developing, progressive field.

Beginning with the use of radium element in 1907 we now for sixteen years have employed radon (emanation) instead of the metallic salt. The radium is preserved in an especially constructed brick vault where the emanation is withdrawn each day into a small glass bulb and accurately estimated by the electroscope as to its amount and activity in millicuries as compared with milligrams of radium. This in turn is enclosed in small brass capsules 3 mm. thick which absorb the irritative alpha and beta rays, and the treatment given is entirely by gamma radiation. In making the application the brass capsule containing the emanation is placed in a rubber cot 1 mm. thick to screen out the secondary or reflected beta radiation. Applications are made with the patient in the knee-chest position which affords a beautiful exposure and enables one to make the application more accurately. As a rule three tubes are introduced in tandem into the cervical canal, filling it from internal to external os. We do not advocate intrauterine radiation in the cervical group as the disease lies below this region and there is risk of sloughing and later pyometra. In addition to this from six to eight tubes are held in a circular cloth form which is folded over the cervix and any vaginal extension; this is held in place with gauze packs previously soaked in water, distending thoroughly the vaginal cavity away from the radium, protective to a considerable extent against such sequelae as an irritative cystitis and proctitis. Three and one-half curie hours is given at a single treatment and without anesthesia. With only small amounts of radium available, a relatively longer time is required to equalize the physiological effect. Immediate symptoms often are nausea, elevation of temperature and malaise, which rarely last over three days. The patient is kept in bed either in the hospital or at home for seven to ten days and seen frequently; if she leaves our care shortly after the application, the instructions are to return in six to eight weeks, in the meantime remaining under her family physician's care. A second treatment ought not to be given at an earlier date and only then in case there is some new development at or beyond the site of the original disease. Lateral nodules should be treated by the interstitial method. With a finger in the rectum and thumb in vagina, under gas and oxygen anesthesia, the emanation points are placed so that each cubic centimeter of disease receives ½ millicurie. Occasionally this type of treatment has to be carried out through an abdominal incision. The patient should be warned that a six or eight weeks' convalescence period must follow the procedure, during which time she should keep quiescent. Tenesmus is considerably relieved by mild sedatives, douches, attention to the bowels and, for the first three weeks, daily application of 5 per cent mercurochrome solution to the cervix with the patient in the knee-chest position. Attention to a regimen of tonics, food, and rest, with some exercise, is important. Follow-up examinations are made at intervals of two to three months during the first year and twice a year thereafter. The primary immediate results of treatment by the above plan are excellent. Primary clinical cures in all but the advanced are almost invariable.

Conclusions

1. In the early cases still operable, a cure is possible by either radium or surgery.

2. Unfortunately this group is distressingly small in spite of the widespread publicity given the subject.

3. The results with radium alone should be as great or greater, without primary mortality.

4. The undisputed field for radium is the group just beyond the possibilities of operation, where the cure rate is 31 per cent.

5. Even in the advanced cases, where there is nothing to offer by surgery, a cure with radium of 9 per cent has been obtained and palliation invariably assured.

6. Preliminary radium treatment will increase operative difficulties and I am not sure it has any value. I am sure post-operative topical treatment is dangerous.

7. In our clinic, radium has supplanted surgery.

8. Today, radium alone offers more in the treatment of carcinoma of the cervix than any other single method at our command.

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ENCEPHALOGRAPHY IN THE DIAGNOSIS OF BRAIN LESIONS.*

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The term encephalography means that a record is made on the roentgenogram of the ventricles and fluid spaces about the brain, after the injection of air into the spinal subarachnoid space. It is used in contradistinction to ventriculography which means that the air is put directly into the ventricles after an operative opening in the skull and a needle puncture of the brain. In the latter procedure only the ventricles are outlined, while in the former, the ventricles, basal cisternae and sulci over the brain surface may be shown.

In 1918 Dandy[1] was the first to use air by the lumbar route as well as into the ventricles for the diagnosis of intracranial lesions. Since then many German and American workers have been using the lumbar method freely. In addition, air has been used directly into the ventricles for many years by most neurological surgeons for the diagnosis and localization of brain tumors.

It is not the purpose of this paper to discuss further the method of ventriculography, but to limit the remarks to encephalography. This method is becoming more widely used in this country in certain types of cases, especially those of intracranial lesions in which a diagnosis cannot be made from the clinical examination.

By the methods of X-ray technic developed by Pancoast and Fay[2], and Pendergrass,[3] a standard has been reached for making the roentgenograms which gives a clear outline of the spinal fluid system in the cranial cavity.

Technic

In order that the best results may be obtained on X-ray examination, it is necessary that the surgeon doing the air injection use the proper technic in injecting a sufficient quantity of air to give the outline of the brain. Practically all of the cerebrospinal fluid in the cranial cavity should be replaced by air with the patient in the sitting position. The patient should previously have had a complete neurological examination, and usually a spinal puncture record of the pressure in the horizontal position. A very high intracranial pressure would make the procedure extremely dangerous and, therefore, should not be done. With the patient in a sitting position, under local anesthesia, a lumbar puncture is made in the usual lumbar interspace, and a record of the fluid pressure is made at the start. It will be found that the normal pressure will be from 300 to 500 mm. fluid, depending somewhat upon the height of the patient, and whether or not he is inclined forward or sitting erect. Five c.c. of fluid are replaced by an equal amount of air in succession, until the required amount of air has been injected. As a rule it requires 100 c.c. or more of air to obtain good roentgenograms. Occasionally a smaller quantity of air is used, should the pressure drop rapidly or the fluid cease to run, indicating that all the fluid has been replaced by the air. Due to the fact that air expands when taken at room temperature and heated to body temperature after it is put into the spinal canal, some men recommend a less quantity of air injected than fluid removed. Other workers try to keep the pressure constant, regardless of the amount of fluid removed or air injected. I have followed the latter method, trying to keep the pressure constant, at the same time keeping a record of the fluid removed and the air injected. It is not unusual to find that when 100 c.c. or more of air has been injected, a slightly less quantity of fluid has been removed, even though the pressure is somewhat lower than at the beginning. During the injection, the position of the patient's head should be changed in various directions and gently tapped, to facilitate drainage of the fluid from the ventricles and subarachnoid spaces over the brain, and to favor the rise of air. Occasionally it will be found that no air has reached the ventricles. This may be due to some obstruction of the ventricular system, usually at the exits of the 4th ventricle or to an error of technic. It is probably more likely due to the latter.

Soon after the beginning of the air injection, the patient complains of headache, which becomes more severe as the end of the procedure is reached. This may be lessened somewhat by the previous administration of a sedative, such as morphin or luminal. It is not unusual to have vomiting about the half-way mark, and the patient may show pallor, sweating or signs of approaching collapse. By going slowly, the latter is less likely to occur. The pulse rate frequently becomes slow and the blood pres-

*Read at the sixty-first annual meeting of the Medical Society of Virginia in Norfolk, October 21-23, 1930.

sure may rise slightly. Headache is the most annoying complaint, but it becomes less when the patient is put back to bed. It gradually disappears in three or four days.

Immediately after the air injection, the patient should be taken to the X-ray room in the sitting position, and the X-rays made without delay. The air is absorbed very rapidly from the subarachnoid spaces, provided there is no obstruction of the absorptive mechanism. Unless the X-rays are made within an hour after the air injection, some of it may escape and not show on the film. Nothing further will be said of the X-ray technic except that lateral stereoscopics of each side of the head and antero-posterior views should be made on the Buckey diaphragm with the patient in a sitting position.

Scope and Limitations

With the proper technic, including a sufficient quantity of air injected, and good roentgenograms, it is possible to outline the ventricles, basal cisternae and sulci on the brain surface. With the patient in the erect posture, the descending horns do not show up, but the main part of the bodies and the anterior and posterior horns of the ventricles do outline satisfactorily. The third and fourth ventricles and frequently the foramen of Monro and aqueduct of Sylvius may be seen. In the subarachnoid system can be seen, as a rule, an outline of the cisternae pontis, interpeduncularis, chiasmatis and cisternae venae magnae cerebri. Sometimes the communication between the latter and the cisternae interpeduncularis can be seen. The sulci overlying the cerebral convexity are shown principally over the parietal and frontal regions. As a rule, those of the temporal and occipital regions are not outlined except in abnormal conditions.

The abnormal conditions shown may be described under the following heads:

Internal hydrocephalus.—The etiology is due to obstruction of the drainage of one or all of the ventricles. The fluid cannot get out and dams back under pressure, causing enlargement of the affected ventricle, or the whole ventricular system. If the obstruction is at the exits of the fourth ventricle, which are the foramina of Magendie and Luschka, the whole ventricular system will be dilated. Should it be at the foramen of Monro, only the lateral ventricle will be affected. Of course, any obstruction of the ventricular drainage would preclude the entrance of air into the ventricular system, and the absence of air in the ventricles on X-ray examination may lead to the supposition that these are blocked. On the contrary, obstructed ventricles cause high intracranial pressure, which would be a contraindication for encephalography, and a spinal air injection had best not be done. There are cases, however, in which the ventricles have been blocked, due to adhesions, inflammatory exudates, and for other reasons, and the obstruction being later removed, leave patent exits. In this case the air can enter the ventricles and the internal hydrocephalus demonstrated.

External hydrocephalus.—When there is obstruction of the fluid exits, due to a faulty absorptive mechanism located in the arachnoid villi and pacchionian bodies over the surface of the brain, along the longitudinal sinus, there will be backward pressure in the cerebral sulci and basal cisternae of the subarachnoid system, resulting in their enlargement and dilatation, with frequently an associated enlargement of the ventricular system. The prolonged fluid pressure found in this condition frequently leads to atrophy of the brain.

Atrophy.—Atrophy may vary in degrees from slight to severe. The committee on standardization of encephalography states that the diameter of a cerebral sulcus normally should not be over 3 or 4 mm., as shown on the encephalogram, and that anything over this should be called atrophy. The outline of the sulci over the occipital and temporal regions is also indicative of atrophy. It is not unusual to see solitary or numerous finger-sized fluid spaces on the cortex in this condition. In the severe cases, the surface of the brain may be separated from the overlying dura for a distance of 2 or 4 cm., as shown by the antero-posterior view of the encephalogram. This atrophy may be caused by brain injury, destruction of brain tissue associated with faulty elimination of cerebrospinal fluid, encephalitis, meningitis, cerebral vascular disease, thrombosis and certain types of epilepsy. At times this atrophy is localized to only one cerebral hemisphere. It may show itself in the ventricular walls with enlargement of the ventricle on that side, or by knuckle-like indentations, if multiple atrophies are present.

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Adhesive arachnoiditis.—Frequently associated with epilepsy there is a thickening with dense adhesions of the pia-arachnoid membranes seen in chronic leptomeningitis. It is not unusual to find on air injection that no air appears over the cortex. The fluid is trapped in these subarachnoid spaces, so that it either cannot get out, or the air cannot get in, although the spaces are enlarged and the fluid abundant. It may be unilateral, in which case the patient may have Jacksonian attacks. Operation in these cases shows that, even with multiple punctures of the arachnoid, it is difficult to drain the pent-up fluid.

Brain tumor.—Many mass-restricting lesions, such as tumor, usually show definite and characteristic findings. If located in one hemisphere, the ventricle on the same side may be depressed, encroached upon, deformed, or blocked, in which case there will be no air on this side. On the antero-posterior view, the ventricular system will be displaced to the opposite side. It is not unusual to see no air in the cerebral sulci on the affected side, and to some extent on both sides, due to the ironing-out and obliteration of these spaces. Cerebellar tumors are usually not demonstrated because of the fact that a suspicion of their presence and the early high intracranial pressure which they produce should be a contraindication to spinal puncture or spinal air injection.

Indications

Encephalography can be used with a fair degree of safety in most intracranial conditions, provided there is no high degree of pressure or localizing signs pointing to the posterior fossa of the skull. It should be limited to those cases in which the diagnosis is not certain and cannot be determined from the clinical examination. It usually shows gross changes and degenerations of the brain, so that a more definite diagnosis and prognosis may be given. In most cases of epilepsy, or in patients with convulsions, especially when the onset is in adult life, encephalography should be used to determine the cause if possible. It is known that tumors are frequently associated with a convulsive state not unlike epilepsy and that 50 per cent of frontal lobe tumors cause convulsions. Early diagnosis and operation before the increase of general intracranial pressure with its train of symptoms may mean much to the patient. Encephalography may be used to reach a more accurate diagnosis in that broad class of cases we regard as brain tumor suspects. This will include certain cases of hemiplegia, aphasia and other focal symptoms of brain pathology such as convulsions, personality changes and probably some cases of mental degeneration, persistent headache, vomiting, dizziness and impaired vision of obscure origin. It may also be used after brain injury and fractures of the skull where symptoms have persisted and there are signs of intracranial pressure from a cyst or clot. It may help to differentiate the post-traumatic neurosis cases from the true brain injuries. Encephalography is sometimes used in infants and children when there is mental retardation or convulsions, to determine the type of lesion present.

Contraindications

Whenever it is dangerous to do a spinal puncture, it is even more serious to employ encephalography. It should not be done in the presence of choked disc or signs of a tumor in the posterior fossa because of danger of herniation of the medulla and its surrounding structures into the foramen magnum. A careful examination of the eye grounds and a neurological examination should always be made beforehand. It is safer to do a ventriculography when there is high intracranial pressure or choked disc. Withdrawal of fluid directly from the ventricles lessens the tendency toward foraminal herniation. After the ventricles have been tapped and the pressure above the foramen magnum has been relieved, a spinal air injection may be done with a fair degree of safety in certain selected cases. When one does an air injection, either by the lumbar or ventricular route, in the presence of a brain tumor, the rise of intracranial pressure following it may make an emergency operation necessary. Frequently it is necessary to do ventricular punctures afterward, to tide the patient over an emergency. The cases which gave us the most alarm after encephalography were the ones with brain tumors, but by means of ventricular punctures or early operation, there has been no mortality. We have on record ninety-five cases in which encephalography was used, and there has not been a death.

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Professional Building.

FRACTURES OF THE PELVIS.*

By M. H. TODD, M. D., F. A. C. S., Norfolk, Va.

The cases discussed in this paper were treated in a mining region of some twelve thousand population, with a centralized surgical service. Of a series of a thousand fractures under my own care, there were forty-seven of the pelvis. There were three deaths.

Etiology and Symptoms

The fracture was produced by direct violence, usually a fall of slate, or by the patient being caught between car-bumpers, or rolled sidewise between a mining-motor and the top of the hallway, or run over by an automobile. This latter was the usual mode of injury in children, in whom four of these fractures occurred. A fall from a height produced the fracture twice in the series.

The pubic or ischial rami were usually involved; that is, the anterior part of the ring of bone around the obturator foramen. The symphysis was occasionally separated; three or four times there was also a fracture of the sacrum, vertically, with upward displacement of half of the pelvis, carrying with it the whole limb. Twice there was dislocation of the hip.

The symptoms consisted of disability or pain in the hip region on walking or attempting to walk, pain in the groin upon squeezing the iliac crests inward, and local tenderness in the groin.

Diagnosis was made by the X-ray. No attempt was made to elicit crepitus or false motion, for fear of causing visceral injury or making it worse.

The symptoms varied a good deal; some of the patients walked about quite well, with so little complaint that, in the presence of other contusions and abrasions, the diagnosis was for a time overlooked. More than once, the first X-ray did not show the fracture, and had to be repeated after a few days, perhaps with the film against the pubis instead of behind the sacrum; and at least once the fracture was only definitely diagnosed after the appearance of callus.

It is reasonable to suppose that, in the past, the injury has often been overlooked, for the symptoms are often mild, and many of the patients will not believe they are hurt to speak of, even after they are told the bone is broken. Further, the Bucky diaphragm has only been generally available during the past ten years or so, and without this machine, it would be impossible to diagnose some of these fractures.

Treatment and Prognosis

Treatment was relatively simple; it consisted of keeping the patient in bed for about a month, and steadying the pelvis, usually with a light plaster cast. Generally a Bradford frame was used for a few days before the cast was put on, with strapping or a binder about the pelvis. The only really difficult part of the treatment was to keep the patient in bed. He would nearly always insist that he was not hurt, and would sit up unless rigidly watched. Some could not be kept from walking about after ten days or two weeks time. The cast reminded him perhaps that he really had a fracture, but, even so, he paid little attention to it.

The results were, for the most part, a complete restoration to the normal, with not the slightest disability for any kind of work. However, seven cases of the forty-seven did have some disability, and returned to only moderate work.

Types of Fracture

I illustrate in the first slide,[1] the usual type of fracture of the pelvis; you see that the obturator ring is broken in two places, but there is little displacement. Obviously, the only treatment necessary is simple immobilization for a while until bony healing has taken place. The next slide[2] shows a similar case; and, in fact, nearly all the fractures in this series have been similar.

Gunshot fracture, illustrated next,[3] gives rise to no displacement; but the associated visceral injury is apt to be severe. This patient, whose

*Read before the Southside Virginia Medical Association, at Petersburg, Va., December 9, 1930.

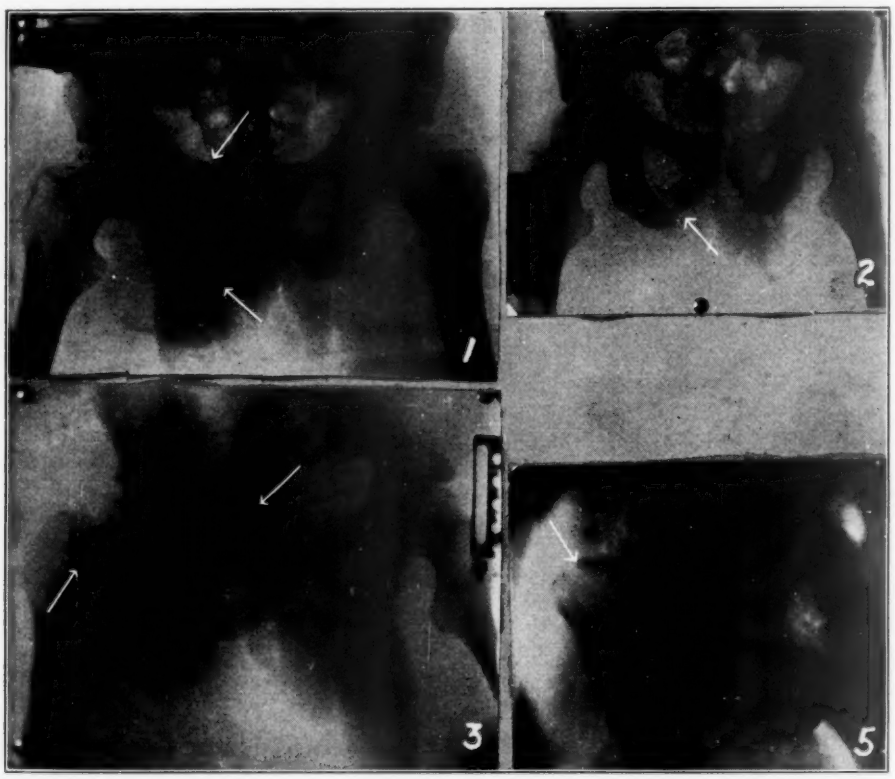
X-ray I borrowed to illustrate this sort of fracture, died, and I am told that he apparently died of internal hemorrhage.

The next slide[4] shows fracture of the pubis in a child. It is necessary to recall accurately the position of the epiphyseal lines in making the diagnosis. The prognosis in children is perfectly good, unless there is visceral injury. There is absolutely no residual disability.

For the sake of completeness, I show next[5] a fracture of the wing of the ilium, not a specially common type. The treatment is simply strapping, not too tight for fear of producing or increasing deformity, and the prognosis is perfectly good.

I illustrate, next, two or three complicated cases. The first case[6] was complicated by a dislocated hip; reduction was made, as in any hip dislocation, by complete relaxation under ether, and simple manual traction and rocking to and fro, after the method of Allis. There was some gross crepitus during this procedure. X-ray taken afterwards showed correct reduction, shown in the next slide.[7] The patient was working again within four months; and, in the end, had no disability whatever.

The next slides illustrate a similar case,[8] with rather worse dislocation; here, after reduction, I used skeletal traction, with tongs at the knee, for the sake of security; here, again, the end-result[9] was perfect, not the slightest disability remaining, and all movements of the hip being restored to normal.



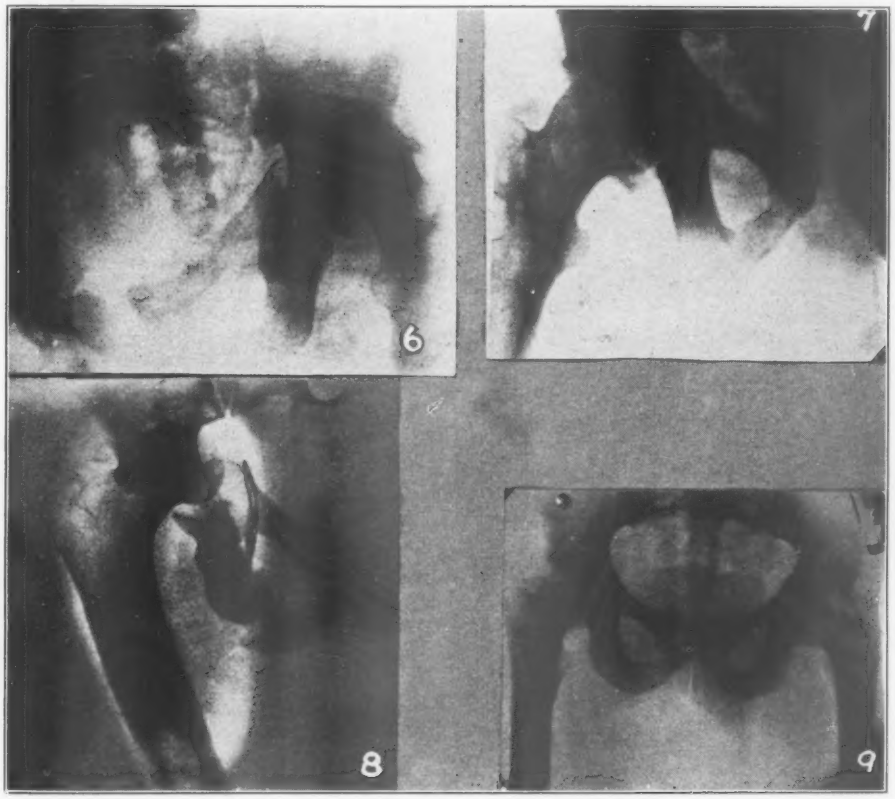
Occasionally the symphysis was separated, as shown in the next slide,[10] and here there was also a fracture through the sacrum vertically, so that the whole limb, attached to its last half of the pelvic girdle, was displaced grossly upward. I am sorry that the sacrum does not show clearly in the slide. Nearly correct position was attained after a few days traction on the leg, with the Bradford frame raised to give hammock suspension; this is here shown.[11] Later, a kind-hearted orderly relieved the patient of some discomfort by letting him down again in bed; and by the time I noticed this

fact, some days later, the symphysis had gaped open again, and the deformity had recurred,[12] and could not be again corrected. The end-result,[13] here shown, was solid union with some upward displacement. The man has gone back to moderate work, and will no doubt return to full duty; but he has a little limp, which he should not have, and I think some actual disability, which would likely not have been the case if proper treatment had been allowed to continue. I was very much chagrined, for the injury was primarily severe, and I had thought to have a perfect result.

In a similar case in a boy, pretty good reduction was finally attained by several days rather heavy traction in suspension, after manipulation under ether had failed.

In a third case,[14] here shown, after very careful study of stereoscopic films, open reduction was done and almost normal reduction attained. The next slide[15] shows the result just after operation, and the next,[16] a later X-ray. You can see that good position has been maintained. The case is recent, but I think there is no question that complete recovery will occur, with no residual disability at all.

These fractures are set by tissue fixation rather quickly; so that if open reduction is for any reason to be done (and it is rarely indicated), it should, I think, be done rather early to avoid difficult reduction.



Complications

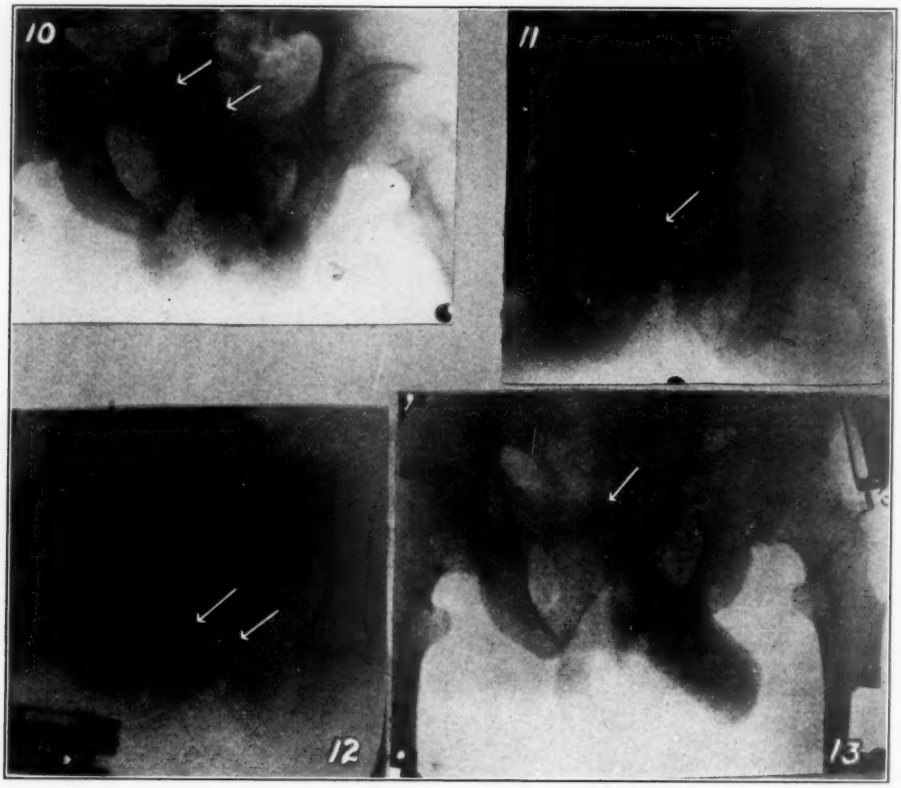
Rupture of the urethra is a rightly dreaded complication; there were four in this series, all of them treated by combined cystotomy and urethrotomy. Two recovered, two died. Traumatic stricture did not occur in the two recovered cases during the months that I followed them.

Partial rupture of the urethra apparently occurred several times, with blood passing per urethram, or perineal ecchymosis. The patients were watched carefully, but not otherwise disturbed. In one case, who could not

void, a catheter could not be passed, and I was considerably worried about the man, for the reason that he also had a broken femur, and marked diabetes. He finally voided spontaneously, and this was by way of a triumph for some of his brethren of the Holiness Faith who had assured me that I would not have to operate. I am only sorry that their other assertion, that he would be walking down the street immediately, could not come to pass. I am very glad to say that he recovered absolutely perfectly, and that he now has no resulting disability from either his femur, his pelvis, or his diabetes.

I may say that there is often some uncertainty about the presence of intra-abdominal injury; the white count does not help much, for a marked rise occurs with simple fractures, to as much as 30,000. One patient presented hiccough and obliteration of liver dulness, and had tenderness over the whole abdomen, which he held rather stiffly for two days, though discomfort was partly relieved by catheterization. This was one of the cases, by the way, with dislocation of the hip, who made a complete recovery.

At present, the diagnosis of rupture of the bowel would be helped by looking for spontaneous pneumoperitoneum by X-ray. This is a very reliable sign of the condition, though its absence by no means rules out other visceral injury requiring surgery. This complication, though feared more than once, did not occur in this series. One child passed some blood per rectum, but had no other sign of injury, and recovered, as usual, very rapidly. One other patient had traumatic asphyxia, with bulging eye-balls, but he also made a rapid recovery.

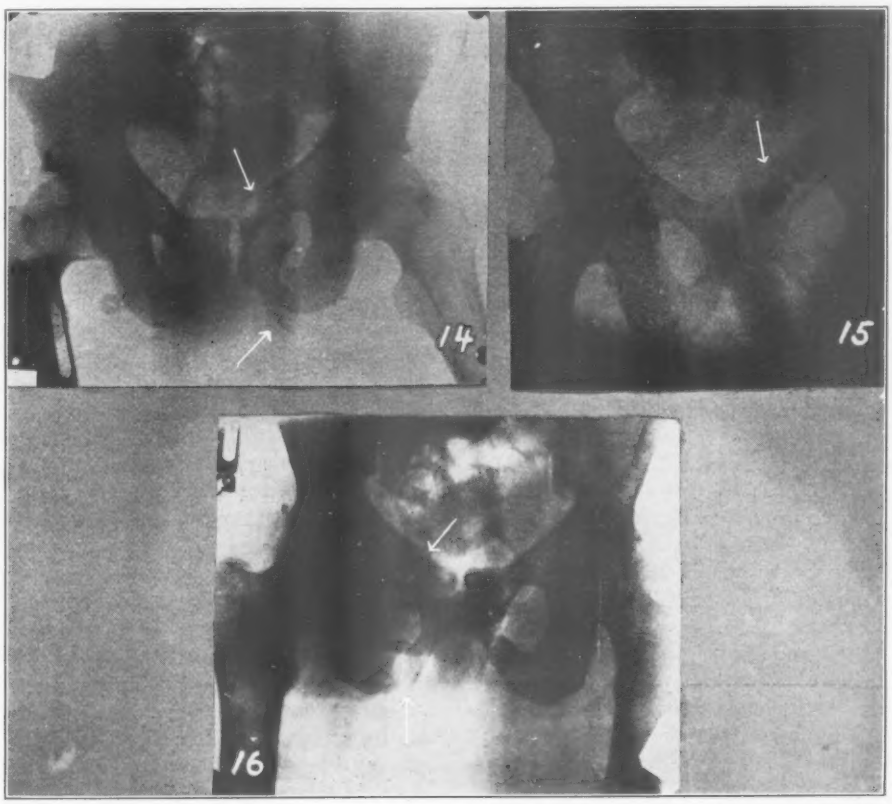


Technique

It is perhaps worthwhile to say that the pelvic cast should fit well. If it is put on, as it sometimes is, on the Hawley table, the buttocks will sag below the level of the sacral support. When the cast has hardened, and the patient

put back to bed, it will be found that the cast has risen anteriorly away from the iliac spines, because of the return of the buttocks to their normal relations as the patient is recumbent. For this reason, we have found it expedient to put the cast on in the patient's bed, with the help of a couple of orderlies; and as soon as the plaster has been rapidly applied, the patient is lowered back into bed, with a pillow transversely under the small of the back; and the front of the cast is then held up anteriorly, away from the abdomen, and the sides of the cast moulded to the iliac crests. It is well to have a band of plaster around each groin to keep the cast from riding up.

Nerve injury we have not met with, except in one case where impotence occurred. Drop-foot is described, but we have not seen it.



Summary

In summary: fracture of the pelvis is not rare, and should always be looked for when there has been any squeezing injury in this region, as, for instance, when a patient has been run over by an automobile.

The diagnosis should be made by a careful X-ray; and it is worth mentioning that the Bucky diaphragm should always be used, though I doubt that any X-ray man nowadays would take the film without it. Local tenderness and pain on pressure over the ilia are usually present; crepitus and false motion should not be elicited for fear of visceral injury.

Treatment is simple in the majority of these fractures, consisting of rest in bed, usually on a frame for ease in using the bedpan and bathing; and by strapping or binding the pelvic region, or using sling suspension, or a light cast.

Union takes place in normal time, and the patients can do light work within five months. Complete recovery is the rule.

Of complications, rupture of the urethra occasionally occurs, and demands immediate

operation if complete and impassable. Marked displacement of the fracture may be treated usually by closed methods; very occasionally open reduction may be wise.

You will note that I am able to speak positively of end-results. This is because this series of injuries occurred in the mines, subject to the Workmens' Compensation Law, and our records of necessity were very detailed, and our follow-up complete, for our own legal protection as well as mere academic completeness of routine.

Three of these patients died; seven returned to moderate work; and thirty-seven returned to full duty as before injury.

712 *Botetourt Street.*

THE SURGICAL TREATMENT OF PULMONARY TUBERCULOSIS.*

By I. A. BIGGER, M. D., Richmond, Va.

Rest is a fundamental principle in the treatment of tuberculosis of the lungs as well as of other organs. Complete rest is impossible when both lungs are involved; but when the disease is limited largely to one lung, more or less complete rest of the involved lung can be obtained by some form of collapse. Numerous methods of collapse have been described, but only four have proven satisfactory. They are, in the order of their importance, pneumothorax, thoracoplasty, internal pneumolysis, and phrenicotomy.

Pneumothorax. Pneumothorax, because it is the simplest and safest procedure, is the most important method of collapse. It should be attempted first where collapse is desired. The indications for and methods of production of pneumothorax are well known. The success of the treatment depends mainly upon two factors, the amount of involvement in the better lung and the degree of collapse obtained. Even in the presence of a moderate amount of activity in the opposite lung the results are frequently good when the more diseased lung is collapsed. The degree of collapse depends upon the number and density of the adhesions, which are usually more numerous and more dense overlying the most diseased areas.

If the adhesions are neither too short nor too dense, they may be divided and the lung satisfactorily collapsed. Two methods have been described by which intrapleural adhesions may be satisfactorily divided, open thoracotomy and the closed method or cautery division under thoracoscopic control. The latter, the method of choice, should be used only when they are sufficiently long to permit satisfactory visualization through the thoracoscope. Heavy or very vascular adhesions should not be divided in this way as hemorrhage may result. If they are so short or dense that division seems inadvisable, thoracoplasty should be considered.

Thoracoplasty. Thoracoplasty should not be performed until pneumothorax has been tried and has failed. The indications are essentially the same as for pneumothorax but the contra-indications must be more strictly observed, for it must be kept in mind that a more radical procedure is being considered. The condition of the opposite lung is of much greater importance, because when the lung is once collapsed by resection of the ribs it cannot be expanded; whereas, if there is an extension of the disease in the better lung during pneumothorax, the lung may be allowed to expand. Thoracoplasty is a shocking procedure and the collapse is rapid, so there is a greater chance of a flare-up in the opposite lung. Extensive tuberculosis of the larynx or of the intestines should be considered a contra-indication, but early tuberculosis of the larynx is usually greatly improved by collapse of the diseased lung and may, therefore, be considered an added indication for collapse.

Thoracoplasty may be performed in one or more stages, depending on the extent of the lesion and upon the patient's general condition. If all the ribs on one side are to be resected, it should be divided into at least two stages. When the diaphrgam has been paralyzed, it is usually not necessary to resect more than eight or nine ribs even when the entire lung is diseased. When the disease is limited to the apex of the lung it may be necessary to resect only four or five ribs, but complete collapse of the diseased portion of the lung can be obtained only by resection of sufficient lengths of the posterior segments. When the operation is divided into stages, either the upper or lower resection may be done first. Some surgeons resect the lower ribs first because they believe that there is less danger of post-

*From the Department of Surgery, Medical College of Virginia. Read before the Southside Virginia Medical Association, December 9, 1930.

operative lower lobe pneumonia. We follow the procedure recommended by Alexander[1], namely, preliminary paralysis of the diaphragm, followed by resection of the upper ribs. The lower portion of the chest wall is extremely important in the evacuation of bronchial secretion by cough. After resection of the lower ribs it cannot function for the removal of secretions and sputum is apt to collect in the lower lobe bronchi and produce a lower lobe pneumonia. When the upper ribs are resected first, the amount of sputum is so greatly reduced that at the time of the second operation there is little to accumulate in the lower lobe bronchi. The collapse is a gradual one with this procedure because that portion of the chest wall supported by the upper ribs collapses following their resection. But when the lower resection is done first, relatively little collapse is obtained until after the second stage when the entire chest wall rapidly collapses. Therefore, if anything should occur to prevent the second stage of the operation, improvement may be expected; whereas, if the lower ribs are resected first and the operation left incomplete, little result will have been obtained.

Fig. 1.—Roentgenogram of chest showing a large cavity in the apex of the right lung.
Fig. 2.—Roentgenogram of the same chest as in Fig. 1 after obliteration of the cavity by posterior resection of the upper five ribs.

If thoracoplasty is performed only on well-selected cases, from 35-40 per cent should obtain a clinical cure and from 25-30 per cent be greatly improved.

PHRENICOTOMY. The indications and contra-indications for phrenicotomy are less definite than for either pneumothorax or thoracoplasty. Yates[2] advises temporary paralysis of the diaphragm by crushing the phrenic nerve in early unilateral disease. Phrenicotomy should be used as a preliminary to thoracoplasty, as suggested by Alexander. It is frequently used when the extent of the disease in the better lung contra-indicates thoracoplasty and when pneumothorax cannot be performed, but when it is used in this way the results are often disappointing. Good results are often obtained in extensive basal tuberculosis even when relatively large cavities are present. It is sometimes useful in conjunction with pneumothorax when the lower portion of the lung is held out by basal adhesions.

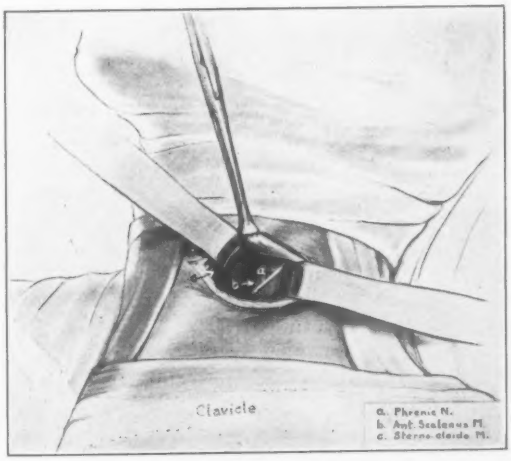


Fig. 3.—Drawing showing the phrenic nerve crossing the anterior scalene muscle in the normal position. a, phrenic nerve; b, anterior scalenus muscle; c, sterno-cleido muscle.

Operations on the phrenic nerve may be performed through either a transverse or perpendicular incision. The transverse incision

is preferable because the scar is less noticeable. From four to five centimeters above the clavicle the phrenic nerve is normally found coursing downward and forward on the an-

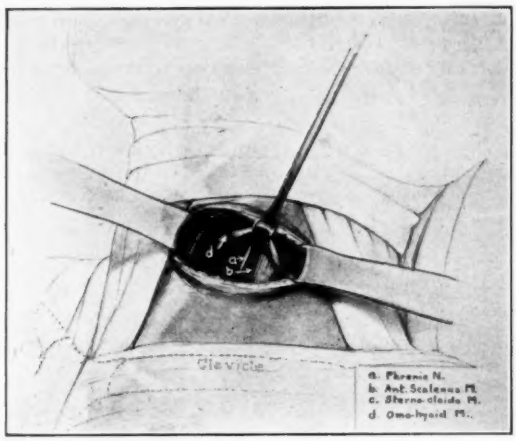


Fig. 4.—Drawing showing the phrenic nerve lying anterior to the anterior scalene muscle. a, phrenic nerve: b, anterior scalenus muscle; c, sterno-cleido muscle; d, omo-hyoid muscle.

terior scalene muscle, but is sometimes located posterior to and occasionally entirely anterior to the muscle. In about 30 per cent of cases there are accessory phrenic nerves. If the

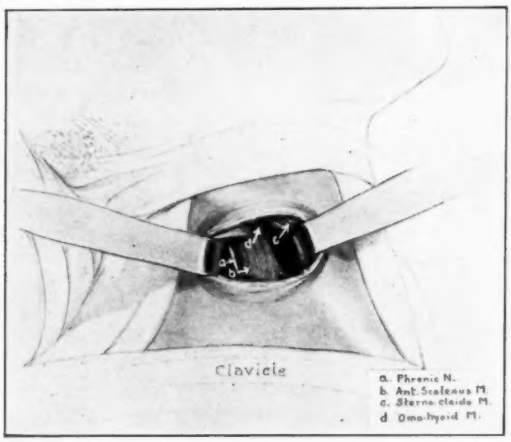


Fig. 5.—Drawing showing the phrenic nerve lying along the posterior border of the anterior scalene muscle. a, phrenic nerve; b, anterior scalenus muscle; c, sterno-cleido muscle; d, omo-hyoid muscle.

main trunk of the phrenic nerve is evulsed the accessory nerves will be destroyed, but if the main trunk is not evulsed the accessory nerves should be searched for and paralyzed.

SUMMARY

Pulmonary collapse is a valuable therapeutic procedure in the treatment of relatively unilateral tuberculosis. Pneumothorax is the most valuable method of collapse and should be used whenever possible. If complete collapse of the lung is prevented by cord- or band-like adhesions, an attempt should be made to divide them. If the adhesions are so extensive or heavy that they cannot be safely divided, thoracoplasty should be considered. The indications for thoracoplasty are essentially the same as for pneumothorax except that thoracoplasty should not be done in the acute exudative lesions, whereas pneumothorax is frequently indicated in such lesions. The contra-indications must be more strictly observed in thoracoplasty than in pneumothorax.

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Memorial Hospital.

THE EXTRACT OF WATERMELON SEED IN THE TREATMENT OF HYPERTENSION.*

By BLANTON P. SEWARD, A. B., M. D., Roanoke, Va.
From the Department of Medicine, Lewis-Gale Hospital.

In January, 1926, Barksdale[1] reported the finding of a glucoside-saponin in the extract of the seed of the watermelon (Cucurbita Citrullus). He named that substance Cucurbocitrin and he found it to be physiologically active when administered to the normal human being and to normal experimental animals. This activity, which manifested itself in a dilatation of the capillaries, was proved by his microscopic studies after the administration of the drug to the frog. By similar studies with the microcapillary tonometer he found the capillaries in the normal human being were considerably dilated within thirty minutes after the drug had been taken orally. This property of dilating the capillaries suggested to Barksdale the possibility that the drug might be useful clinically in reducing high blood pressure. He found that it reduced the pressure in patients with hypertension due

*Read at the sixty-first annual meeting of the Medical Society of Virginia in Norfolk, October 21-23, 1930.

to tuberculous nephritis, but his results with the drug in patients with arteriosclerosis and hypertension were unsatisfactory. Barksdale also found the drug to be non-toxic when given in very large doses.

Since the introduction of Cucurbocitrin, which is marketed under the trade name "Citrin," we have found in the literature only two articles on its use. Wilkinson[2] reported the results obtained from its use in sixty-eight cases of "hypertensive cardiovascular disease." In his series, fifty-six of the sixty-eight patients "showed a sufficient reduction of the arterial pressure to be of clinical importance." He thought Cucurbocitrin was more efficacious in hypertension not associated with sclerosis of the small arteries.

Althausen and Kerr[3] reported their results following the administration of the drug to forty patients. These observers concluded that "Cucurbocitrin therapy in hypertension cases causes considerable lowering of the blood pressure, and gives complete or marked relief of symptoms in a majority of cases." They stated also that "patients under the age of fifty years and having little cardiovascular damage are more likely to respond favorably to Cucurbocitrin."

With the information derived from these reports, the drug seemed to us to be worthy of consideration, and we subjected sixteen well controlled hypertensive patients to Cucurbocitrin therapy. We were especially anxious to determine which variety of hypertension would respond to the drug, and also for what length of time its effects might persist.

Selection and Examination of Patients

We realized the difficulties encountered in deductions from any therapeutic procedure dealing with hypertension, and we preferred to carry out the investigations in patients whose habits and environment would be least disturbed, thus reducing as far as possible the factors of uncertainty which would enter into the appraisal of results. Therefore, ambulatory patients were considered to be more desirable. The majority of the patients,—eleven,—were ambulatory, while five of the patients (Cases 9, 10, 11, 12 and 13) were hospitalized, either because their symptoms were severe or because of the existence of other conditions which proved, as far as we can say, not to be related to the hypertension but which required treatment. Nearly all of these patients knew they had had high blood pressure for one or more years, and they had had periodic treatment which consisted of rest, dietary measures and sedatives. Several of the patients had been under our observation for three or more months before receiving the drug; the other patients were given the treatment only after they had been under observation a sufficient length of time, from one to three weeks, for their average blood pressure to be determined. Patients with temporarily elevated blood pressures were not utilized.

In every case a complete history was taken and a general physical examination was made with special attention being given to features indicative of involvement of the heart, arteries and kidneys. Laboratory examinations included urinalyses, blood counts, hemoglobin, the phenolsulphonephthalein test and blood urea estimations, though neither of the last two tests was made in two cases. The blood Wassermann reaction was negative in all patients. Electrocardiograms were made when indicated.

Methods of Observation and Treatment

Blood pressure observations were made about the same hour each morning with the sphygmomanometer (Baumanometer) applied to the left arm after the patient had rested comfortably in a chair for five to ten minutes. The hospital patients were kept in bed until the last few days of hospitalization, and their blood pressures were taken every third day, five to ten minutes after we entered their rooms. When the average blood pressure had been determined, Cucurbocitrin was administered in 50 mg. (1/64 grain) doses orally three times a day to the majority of the patients. Two of them took 50 mg. four times daily after having taken 50 mg. three times a day for four days, and two of them took 50 mg. four times daily from the beginning of the treatment. If the patient received no benefit from the drug in fifteen days, it was discontinued, for experience with the earliest treated cases led us to believe that if there was no reduction in the blood pressure within two weeks, none might be expected. No other drugs which might influence the blood pressure were given during this period.

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TABLE GIVING CLINICAL DATA AND RESULTS OF CUCURBOCITRIN THERAPY IN 16 CASES

Case	Age	Sex	Duration of Hypertension	Chief Symptoms	Cardiac Signs	Arterio-sclerosis	Blood Pressure: Average Blood Pressure Before Cucurbocitrin	Blood Pressure: Average Blood Pressure After Cucurbocitrin	Blood Pressure: Millimeters of Reduction With Cucurbocitrin	Laboratory Findings: Urine: Albumin	Urine: Casts	Urine: Nocturia	Urine: Phenolsulphonephthalein Test	Blood: Urea, mgs. per 100 cc.	Symptomatic Relief With Cucurbocitrin	Days of Cucurbocitrin Therapy	Previous Treatment	Remarks
1	38	M	2 Yrs.	Numbness in left side of face and in left arm; palpitation, nervousness for two years.	Slight enlargement of heart; systolic murmur. Aortic 2 accentuated.	None demonstrable.	162–116	156–112	6–4	Trace	Occas. Hyalin	0	55%	15	Partial	16	Diet, rest and bromides one year previously. Sodium Sulphocyanate six months previously.	Responded well to Sod. Sulphocyanate six months previously. The blood pressure was reduced from 190–120 to 154–110.
2	63	M	Unknown	"Fidgets" for three days, came on suddenly. Cannot hold left arm and leg still. Has had this symptom three days. Giddiness occasionally for three months.	Heart enlarged. Aortic 2 accentuated.	Marked in large arteries; moderate in retinal arteries.	190–115	184–115	6–0	Trace	Few Hyalin	1–2	23%	31	None	26	Not any.	Patient had a small hemorrhage near motor area of brain, giving rise to the irritative phenomena. Took Cucurbocitrin, 50 mg. t. i. d., for four days, then 50 mg. four times daily. The drug was given twice later on, ten days each time; no reduction in the pressure was observed. Died two months later, following cerebral hemorrhage.
3	45	M	5 Yrs.	Inability to concentrate attention. Weakness, dizziness, palpitation and dyspnea.	Heart slightly enlarged. Systolic murmur at apex.	Moderate in large arteries; slight in retinal arteries.	196–110	178–102	18–8	Trace	Few Hyalin	3–5	67%	..	Complete	14	Diet.	Blood pressure 15 m. m. lower after third dose. Took Cucurbocitrin at intervals of one month, with the same amount of reduction.
4	62	F	Unknown	Nervousness, palpitation and dyspnea.	Heart slightly enlarged. Soft systolic murmur. Aortic 2 accentuated. Ecg. notched QRS III.	Slight in retinal arteries.	178–110	170–108	8–2	0	0	0	..	..	None	15	None.	Abscessed teeth extracted before Cucurbocitrin was prescribed. B. M. R. plus 2.
5	20	M	2 Mos.	Irregular heart.	Moderate tachycardia, varying	None.	142–80	138–80	4–0	0	0	0	..	..	Slight	15	None.	A college student whose blood pressure was found

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				Dyspnea.	Aortic 2 accentuated. Ecg. notched QRS III.	arteries.												2.	
5	20	M	2 Mos.	Irregular heart.	Moderate tachycardia, varying between 90 and 130. Sounds were of good quality. Normal size (X-Ray). Ecg. normal.	None.	142–80	138–80	4–0	0	0	0	..	..	Slight	15	None.	A college student whose blood pressure was found to be elevated when he was examined for R. O. T. C. B. M. R. minus 14.
6	73	M	2 Yrs.	Frontal headaches, irregularly each day, for six months. Dizziness occasion.	Heart slightly enlarged. Aortic 2 accentuated.	Moderate in larger arteries. Retinal arteries look normal for age.	186–80	162–70	24–0	1 plus	Few Hyalin	1–3	33%	38	Complete	14	None.	Blood pressure showed decrease on third day. Takes Cucurbocitrin at intervals of six to eight weeks.
7	68	F	5 Yrs.	Dizziness, occipital headaches in A. M.; weakness.	Quality of first sounds good for age. Aortic 2 accentuated. Slight increase in TD and in retrosternal dullness on percussion.	Marked in larger arteries. Retinal arteries show slight degree of sclerosis.	180–100	160–96	20–4	Trace	Hyalin	3–4	..	34	Complete	16	Diet; bromides.	No reduction in blood pressure until the third day, when it was 15 m. m. lower. Takes 50 mg. Cucurbocitrin t. i. d., for ten days every two months.
8	55	F	15 Yrs.	Occipital and generalized headaches in A. M., dyspnea, pains around heart and in left arm; weakness and gradual loss of weight.	Heart moderately enlarged. Aortic 2 accentuated. Systolic murmur. Ecg. marked left preponderance and inverted T III.	Moderate in both the large and small arteries.	178–110	182–118	0	0	0	1	55%	20	None	21	Diet; bromides; luminal and rest. One year ago and again six months ago, took Sodium Sulphocyanate Gr. III t. i. d. for three weeks.	A reduction in this patient's blood pressure, with an improvement in symptoms after Sulphocyanate.
9	40	F	8 Yrs.	Nervousness, dizziness, occipital headaches in A. M., spots before eyes, choking sensations.	Heart enlarged, rate increased, aortic 2 accentu- Ecg. tachycardia, 120; marked L. V. P. notched Q. R. S. III inverted P III and T III.	Marked in retinal arteries; palpable arteries feel normal.	220–138	220–138	0	Trace	0	1	37.5%	20	None	16	Bromides; rest in bed.	This patient had hyperthyroidism also; first B. M. R. plus 58, which came down to plus 15 after taking Lugol's Sol. and Luminal. When the doses of these drugs were reduced, the rate went to plus 40, but it came down to plus 16 when the drugs were given in larger doses. Then these drugs were discontinued and she was given Cucurbocitrin, 50 mg. t. i. d., but no reduction in blood pressure was observed. X-Ray treatments given for hyperthyroidism.

Case	Age	Sex	Duration of Hypertension	Chief Symptoms	Cardiac Signs	Arterio-sclerosis	Blood Pressure			Laboratory Findings					Symptomatic Relief With Cucurbocitrin	Days of Cucurbocitrin Therapy	Previous Treatment	Remarks
							Average Blood Pressure Before Cucurbocitrin	Average Blood Pressure After Cucurbocitrin	Millimeters of Reduction With Cucurbocitrin	Urine				Blood				
										Albumin	Casts	Nocturia	Phenolsulphonephthalein Test	Urea, Mgs. per 100 cc.				
10	51	M	10 Yrs.	Occipital headaches in A. M., for three months. Numbness in left side face and in left arm for ten days and in left foot for three days. Dyspnea.	Heart moderately enlarged; aortic 2 accentuated. Ecg. L. V. P.; notching Q. R. S. III.	Marked in retinal arteries; slight in larger arteries.	194–140	182–138	12–2	Slight Trace	Hyalin	1	34%	35	Partial	14	Not any.	Cucurbocitrin 50 mg. at 8, 12, 4 and 8 o'clock. No lowering of blood pressure. One week after taking the drug, he felt more comfortable.
11	60	M	Unknown	Fatigues easily for two months; insomnia.	Heart moderately enlarged; systolic murmur. Aortic 2 accentuated. Ecg. marked L. V. P., T III inverted.	Both large and small arteries.	190–106	190–106	0	1 Plus	Occas. Hyalin	1	33%	32	None	15	Not any.	50 mg. Cucurbocitrin 8, 12, 4 and 8 o'clock.
12	33	F	1 Mo.	Occipital headache in A. M. for four months. Diplopia and blurring of vision for three weeks.	Heart moderately enlarged. Soft systolic murmur at apex. Aortic 2 accentuated. Ecg. inverted T III.	Marked in retinal arteries. Retinal hemorrhage in left.	180–110	180–114	0	1 Plus	0	1	45%	27	None	15	Rest in bed; bromides.	Pyelitis on both sides for five years. No cystoscopic treatments for three years. Hospitalized for three weeks during which time Cucurbocitrin was given t. i. d. No cystoscopic treatments were given on account of the hypertension.
13	55	F	Unknown	Failing vision, dizziness, pains around heart; dyspnea and palpitation. Occipital headaches in A. M. for three months.	Heart much enlarged. Muscle element, first sound fairly good; systolic murmur. Aortic 2 amphoric in quality. Ecg. marked L. V. P. Inverted T III.	Moderate in retinal arteries. Very slight in larger arteries.	190–115	190–115	0	1 Plus	0	1–2	30%	25	None	15	Not any.	Cucurbocitrin, 50 mg. t. i. d. for four days, then four times daily for eleven days.
14	62	F	3 Yrs.	Numbness in	Not enlarged.	Slight in	186–94	180–92	6–2	0	0	1	45%	91	Par-	14	Not any.	Five months after treat-

14	62	F	3 Yrs.	Numbness in both hands, more in left; dizziness.	Not enlarged. Sounds are of good quality.	Slight in retinal arteries and in large arteries.	186–94	180–92	6–2	0	0	1	45%	0	Partial	14	Not any.	Five months after treatment, the level of blood pressure was 168–90 and the symptoms had disappeared. This improvement was not due to Cucurbocitrin.
15	62	M	Unknown	Moderate weakness, dizziness and loss of weight.	Heart moderately enlarged; quality of sounds good; systolic murmur. Aortic 2 accentuated.	Definite in large arteries; slight in retinal arteries.	210–115	180–97	30–18	1 Plus	0	1	..	..	Complete	15	Rest; bromides; diet	During the past two years, the patient has had four attacks of heart failure, each accompanied by auricular fibrillation. Last attack seven months ago. Resumed his work, farming, 2½ months later. Has been working steadily since.
16	60	M	4 to 5 Yrs.	Weakness, nervousness, dizziness, frontal and occipital headaches in A. M.	Heart enlarged; quality of sounds fairly good. Systolic murmur at apex; basal second sounds accentuated.	Marked in large arteries; slight in retinal arteries.	197–105	195–102	2–3	0	0	1	42½%	40	None	18	Diet; rest.	Two months after Cucurbocitrin was administered, the patient's general condition improved; his blood pressure was lower, 175–96; this reduction is not attributable to Cucurbocitrin.

Clinical Observations

Blood pressure readings were made twenty-five minutes after ten patients had received the first dose in order to determine whether Cucurbocitrin causes an immediate reduction of the pressure. No immediate responses were observed. Althausen and Kerr[3] reported that "following a single dose of Cucurbocitrin there is usually in hypertensive cases a fall of the systolic and diastolic pressures beginning about fifteen minutes after the administration of the drug." In our group the earliest reduction was observed in Case 3, one-half an hour after the fourth dose had been taken, the systolic pressure being 15 m.m. lower than it was in any of the previous readings. When the drug acted favorably in other patients no significant reduction in their blood pressures was noted until the third day of treatment, and the continued administration of the drug in these cases brought about a prolonged reduction in the pressure, accompanied by symptomatic improvement.

A reduction of 18 m.m. or more of mercury in the systolic pressure occurred in four of the sixteen patients, the average reduction being 23 m.m. in the systolic and 10 m.m. in the diastolic. The most marked reduction observed was 44/30 m.m. (from 190/80 to 146/50) in case 6, twelve days after beginning the treatment. The effect of Cucurbocitrin persisted from three to eight weeks, the average duration being five and one-half weeks. When it became necessary to give the drug at later intervals, the same dosage produced the same degree of lowering of the pressure.

Complete symptomatic relief was noted by the four patients in whom a satisfactory reduction of the blood pressure occurred; a sense of well-being, a clearer mind and more energy were experienced by each patient. Four of the patients experienced slight or partial improvement which was probably due to the psychic effect of taking medicine. Eight patients observed no improvement in their symptoms.

No untoward effects, either from a considerable lowering of the pressure or from toxic action of the drug, were observed in any of the patients. Frequent urinalyses revealed no evidences of renal irritation. When a reduction in the pressure occurred, the quality of the first cardiac sound improved and the aortic second sound became less accentuated.

Discussion

A satisfactory reduction in the blood pressure occurred only in four patients in a group of sixteen treated with Cucurbocitrin. The question, what constitutes a satisfactory reduction, may be raised. It is a well known fact that blood pressure, especially the systolic, is labile; so many factors are responsible for the variations that conservatism is required in evaluating the results obtained from the employment of any drug in the treatment of hypertension. Such factors as the age of the patient, the sex, the degree and duration of the hypertension, arteriosclerosis, renal damage and the mental attitude of the patient must be taken into consideration when reduction in the pressure and symptomatic improvement are noted. These factors were borne in mind in this attempt to appraise the value of Cucurbocitrin.

An average minimum reduction of 20 m.m. in the systolic pressure with a corresponding reduction in the diastolic may be considered a satisfactory lowering of the blood pressure; therefore, an average reduction of 20 m.m. was chosen as the criterion of success with Cucurbocitrin therapy. This figure represents the average reduction from the time Cucurbocitrin produced the desired effect until it became necessary to administer the drug again.

The age of the patients was not a factor in determining the success of the treatment in this series. The average age of those who responded to the treatment was sixty-two years, while the average age of those who did not respond was forty-nine years. Severe hypertension occurs more frequently in the latter age group, and is less amenable to treatment, whereas in elderly persons with hypertension the level of the blood pressure is often not as high, and it may be more easily reduced by drugs which produce either a vasodilator or a sedative effect.

Three of the patients who were benefited were males, the fourth was a female who had passed through the menopause twenty years previously. Although there was only one female who responded to the treatment, we believe the sex is of little importance in estimating the value of Cucurbocitrin or of any drug in the treatment of hypertension. The amount of renal damage seemed also to have no bearing on the results obtained from the use of Cucurbocitrin, as the patients who were benefited by the drug presented evidences of as severe nephritis, such as nocturia, albuminuria, casts and urea retention, as those in whom the drug was not effective.

The duration of hypertension, as calculated from the time of detection by instrumental means, appears to be definitely significant in the results obtained with Cucurbocitrin. The patients who responded to this treatment gave a history of having had high blood pressure for five years or less, the average duration being four years. On the other hand, the average duration of hypertension in those patients who were not benefited by this treatment was seven and one-half years. In other words, those patients who were not benefited had had hypertension nearly twice as long as those whose symptoms were improved and blood pressures were reduced.

When the level of the blood pressure remains above the normal, varying degrees of arteriosclerosis develop and we will usually find that the sclerosis predominates either in the large arteries, as in the radial, or in the small ones, as in the retinal, though sometimes the same degree of sclerosis may be found in both the large and small arteries. Sclerosis mainly of the small arteries is more frequently associated with the hypertension of middle aged persons; in these patients we often see both the systolic and the diastolic pressures much above the normal. Sclerosis of the large arteries without much sclerosis of the small ones is often associated with a moderate increase in the systolic pressure and a slight or moderate increase in the diastolic in elderly persons. High blood pressure in these persons may be spoken of as senile hypertension. Senile hypertension as a rule responds more readily to drug therapy than hypertension in middle aged persons and, as will be seen in the table, the favorable results obtained with Cucurbocitrin in our series of patients were observed in patients who had this type of hypertension. The other patients, excepting the two who were not benefited by this treatment, showed extensive sclerosis of the retinal arteries. The two exceptions were Cases 1 and 5, in which no sclerosis was demonstrable in either the large or the small arteries, yet no significant reduction in the pressure was observed in either case.

The mental attitude appeared to have little

if any influence on the reduction of the pressure in those patients who responded to the treatment. All of them were phlegmatic in temperament; none of them was susceptible to suggestion, or worried about their blood pressure, and they continued doing their work, which in each instance was not heavy but required constant effort.

Summary

1. A brief review of the pharmacologic action of Cucurbocitrin is given.

2. The methods of the examination of sixteen patients to whom Cucurbocitrin was given and of the administration of the drug are outlined.

3. Cucurbocitrin was effective in reducing the blood pressure in four of the sixteen patients, but no immediate reduction was observed. The administration of the drug for two weeks brought about a prolonged reduction accompanied by symptomatic relief.

4. The patients who were benefited had the senile type of hypertension,—a moderate elevation in the systolic pressure with a slight or moderate increase in the diastolic. In each of these patients the large arteries were markedly sclerosed.

5. The average duration of the effect of Cucurbocitrin in these patients was five and one-half weeks.

6. Cucurbocitrin was not effective in reducing the pressure in patients who showed extensive sclerosis of the retinal arteries.

7. The age of the patients, the sex and the amount of renal damage seemed to have no influence on the success of Cucurbocitrin in this group of patients. The duration of hypertension and the site of the sclerosis were important factors in the results obtained with Cucurbocitrin.

8. Cucurbocitrin may be given in large doses without producing toxic effects.

Conclusions

1. Cucurbocitrin appears to be efficacious in reducing the blood pressure in patients with senile hypertension.

2. This drug appears to be of little if any value in the treatment of the severe grades of hypertension with which much sclerosis of the small arteries is associated.

3. This study reaffirms the fact that a reduction in the blood pressure by a drug is due to a dilatation of the small arteries and capillaries and when they have lost their elasticity by becoming sclerotic, no drug known at present will be successful in reducing the pressure.

We wish to express our thanks to the Table Rock Laboratories of Greenville, S. C., for supplying the drug for this study.

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FATAL EMBOLI—WITH REPORT OF CASES.*

By O. T. AMORY, M. D., Newport News, Va.

Case No. 10,482, M. I., female. Married. Age forty-nine. Housewife. Weight 220.

Was admitted to the Riverside Hospital, December 7, 1928, at 4 P. M. with a diagnosis of strangulated hernia the size of a large grapefruit. Had been strangulated since 11 A. M. Numerous efforts at reduction had met with failure.

Gave a history of having had numerous strangulations previously, some of which she had been able to reduce, and others a physician had reduced. Patient was acutely ill. Blood pressure 144 over 90. Urine—specific gravity 1,038, trace of albumen, positive for sugar, trace of acetone. Many hyaline casts, an occasional granular cast and an occasional leucocyte cast. Hemoglobin 82 per cent. Red blood cells 4,616,000. Whites 15,000. Polys 84, and so forth.

She was operated upon immediately under local, nitrous oxide, and small amounts of ether. She was stimulated while on the table. At operation there was a sac the size of an infant's head, multi-locular in type, consisting of four or five different sacs. In each of these the omentum was found densely adherent and there was a foot of small bowel incarcerated in the sacs. After repeated applications of heat, the bowel regained its tone and cleared up all right. The wound was closed routinely. The patient was lavaged on the table and, after removal to her room, she drank 2,000 c.c.

*Read before the Warwick County Medical Society, at Newport News, Va., October 27, 1930.

of saline in either axilla readily. External heat, fluids, stimulation, and insulin were given with immediate gratifying results. Her progress notes were as follows:

December 7, 1928.—Patient admitted in rather marked shock, critically ill and was operated imediately for strangulated umbilical hernia.

December 8, 1928.—Patient is doing fairly well, slightly nauseated, urine contains sugar and acetone. She is still nauseated this evening, and stomach was lavaged.

December 9, 1928.—Patient is slightly better this morning, not quite so nauseated, had a fair night, expelling glucose and soda with flatus.

December 10, 1928.—General condition is improved. No nausea. Taking liquid nourishment. Good results from an enema.

December 11, 1928.—General condition improved.

December 12, 1928.—Patient is doing very nicely; taking some soft diet.

December 13, 1928.—Feeling much better this morning; had a good night. Good bowel movement.

December 14, 1928.—Patient is greatly improved, general condition is very good.

December 16, 1928.—Patient doing very nicely. Wound dressed, tension sutures removed.

December 18, 1928.—Patient doing very nicely. Wound dressed, dermal sutures removed. Wound strapped.

December 22, 1928.—Doing very well; general condition good, on limited select diet. Daily bowel movement.

December 24, 1928.—Doing very good.

December 25, 1928.—Patient out of bed; general condition good.

December 26, 1928.—Wound dressed and there was a slight amount of serum in the lower angle of the wound which was evacuated. Urine still positive for sugar. Patient will be discharged tomorrow.

December 27, 1928.—During the night patient developed phlebitis in the left leg that became greatly swollen and purple with considerable pain, requiring an opiate. Wound was dressed this morning. Very little serum in the wound. About 10:15 A. M. patient was taken with sudden loss of consciousness, difficult breathing with cyanosis, and died immediately.

I was out of the city this particular morning and patient was seen by my associates. From the general description I think we are safe in saying this patient had developed a cerebral emboli.

Upon my return, the patient had been removed to her home in the country and an autopsy was not obtainable.

Case 12,528.—Male. J. F. C. Age forty-one. Farmer.

Was admitted to the Riverside Hospital April 13, 1930, with the following history:

For the past twenty years patient had periodical attacks of pain in the upper abdomen, gas, indigestion, constipation, and so forth. For the past two or three years these attacks had been closer together, more severe, and lasting longer. Physical examination was essentially negative with the exception of X-ray dye of the gall-bladder which showed a pathological gall-bladder with one large stone, slight tenderness over the gall-bladder, and rather marked tenderness over the appendix. His heart was negative, no murmurs, shocks or thrills heard. Blood pressure 120 over 80. Hemoglobin 80 per cent. Red blood cells 4,880,000. Whites 5,200. Urine negative.

April 14, 1930, patient was operated with right rectus incision. The appendix was subacutely inflamed and embedded in adhesions. Gall-bladder was thickened, tense, chronically inflamed with numerous adhesions and one large stone. Gas, ether anesthesia.

His progress notes are as follows:

April 13, 1930.—Admitted to the hospital. General physical examination showed condition good. Prepared for operation in the morning with a diagnosis of cholecystitis with one large stone, chronic appendicitis.

April 14, 1930.—Patient stood the operation very well, and reacted normally. Was unable to void; slight nausea, no vomiting. Had a good post-operative night and day.

April 15, 1930.—Wound dressed, moderate amount of drainage. General condition good; unable to void.

April 16, 1930.—Wound dressed, cigarette drain shortened, moderate amount of drainage. General condition good. Quite a bit of nausea. Was given gastric lavage at 10 P. M.

Voided normally today and has had good results from two enemas.

April 17, 1930.—He had a good night, no nausea nor vomiting. Moderate amount of drainage; general condition good. Taking liquids today.

April 19, 1930.—Is very much better today, taking liquids. Wound dressed; very little drainage; tube removed; in good condition.

April 21, 1930.—Wound dressed, tension sutures removed; wound in good condition. Soft diet.

April 24, 1930.—Wound dressed, no drainage. General condition good; dermal sutures removed. General condition of the operative field and patient very good.

April 26, 1930.—Patient had a very good night. Wound strapped; propped up in bed. On select diet. General condition good.

April 28, 1930.—He went to sleep at 11 P. M., after a very good day, slept until 6 A. M., when he was awakened with acute precordial pain and dyspnea. I saw him fifteen minutes later; he was in what I considered acute pulmonary crisis, dyspnea, cyanosis, collapse, and died ten minutes later.

This case I have pronounced as pulmonary emboli.

These cases are presented:

First: To discuss a real surgical tragedy that will befall any surgeon of any considerable amount of experience, sooner or later.

Second: To see what we really know about its cause.

Third: Its symptomatology.

Fourth: Its progress and prognosis.

Fifth: Treatment.

In the author's opinion we are dealing with an embolus or emboli regardless of where it terminates. Therefore the whole after-picture will be determined by the size, number, and vital tissues involved. What is the cause of this condition? Why should a patient survive the trauma, shock, and so forth of a major surgical procedure, progress nicely, and be apparently well on the road to complete recovery, then all of a sudden out of a clear sky develop a picture of this kind? The medical profession has never satisfactorily answered that question, but as usual there are quite a number of theories.

Etiology.—Under the contributory causes one may mention: It is more frequent after middle life. Surgical cases are more susceptible than medical. Varicosities give a peculiar susceptibility. The condition is very rare if the operation is above the diaphragm. Thrombophlebitis usually precedes. Any variety of cardio-vascular disease is a factor. As a predisposing cause, intravenous therapy has been mentioned. Venous stasis predisposes. Gynecological cases head the list. Left common iliac vein or one of its branches are frequently involved. Undue trauma, dehydration, lying still in bed, low blood pressure and so forth, enter the picture.

As to the theories, we have three distinct schools:

(a) Aspiration hypothesis; (b) Embolic; (c) A third school of more recent origin emphasizes the frequency of massive or lobular atelectasis resulting from bronchial obstruction.

Holman and Mathis have proven that an embolus must be infected to produce marked pathological changes in the lung.

Foss and Kupp, studying the pulmonary complications following more than four thousand general surgical operations, and four thousand operations on the nose and throat, all performed in the same hospital with same anaesthetists and paralleled operating room technique, found an incidence of 1.7 per cent on the general service, while there were no cases of pulmonary complications whatever on the nose and throat service. The incidence of pulmonary complications following spinal anaesthesia was found to be as great as with patients who were operated upon under general inhalation anaesthetics. They further conclude that their studies strengthen the theory that embolism plays the chief role in the production of most post-operative pulmonary complications and that: (1) infarctions (minor emboli) are far more common than has been generally supposed; (2) aspiration plays but a minor role in the production of pulmonary complications; (3) pulmonary complications are, relatively, infinitely less common following operations on the upper respiratory tract than following operations on the abdomen and pelvis; (4) irritation by the anaesthetic or the aspiration of foreign substances during inhalation anaesthesia probably plays a part in the production of post-operative bronchitis and pneumonia (however, the

fact that these complications follow spinal and even local infiltration anaesthesia with great frequency suggests that other factors are of equal importance); (5) the incidence of post-pulmonary complication is as high following spinal anaesthesia as after general inhalation anaesthesia.

Symptomatology.—Quite frequently there are encountered at autopsy a number of cases with emboli or infarcts of the lungs which are not recognized during life, which, however, have symptoms. In the pulmonary condition one may find four or five different types of disease.

(a) There may be a small number of emboli which may not produce any marked symptoms. It may clear up and have repeated attacks without being recognized.

(b) There may be found a number of emboli producing a slightly more marked picture with slight dyspnea, pain, and coughing up of blood, frequently confused with post-operative bronchitis, or acute pulmonary tuberculosis.

(c) In the third group there occurs certain pulmonary changes that may possibly determine the seat of pulmonary emboli during life.

(d) Finally there are a group in which the emboli produce a rapid asphyxiation by a sudden plugging of the main trunk or a branch of an artery. The author will make no attempt to discuss the various symptoms produced by each type or the various methods of determining their existence.

In the cerebral type the same general conditions exist, but are more pronounced and more definite usually because the areas involved are more vital.

Its Progress and Prognosis.—This will always depend upon the tissue or tissues involved and the extent of involvement. If one gets a plugging up of the main pulmonary or cerebral artery, it means invariably sudden death. Regardless of what procedure is instituted for its relief, if a vital structure is involved, the progress will vary in proportion to areas involved and amount of involvement. Frequently the condition is so slight as not to be recognized. In others, slightly more involvement may leave a chain of sequelae, varying from slight bronchitis, pneumonia, lung abscess or gangrene of the lung, various heart changes, and so forth. You may have repeated attacks of the cerebral type, when less silent areas are involved, or small emboli in vital areas develop. One may find various other mental manifestations varying from slight aphasia to various mental incapacities.

Treatment.—Prophylactic. Hyperventilation during and after operation with carbon dioxide and oxygen as advocated in patients known to be prone to develop this condition. (Scott and Cutler.)

Change the position of the patient every six hours after operation. (Sante.)

Curtailment of post-operative sedatives, especially those that depress the cough reflex. The use of thyroid as suggested by Walters.

When the symptoms definitely appear, the oxygen tent is usually the most effective aid. From an operative standpoint, Trendelenburg's operation has been successful in the hands of some surgeons, as well as decompression in the cerebral types.

Medical Arts Building.

A PROBLEM IN INTESTINAL SURGERY.*

By JAMES A. GANNON, M. D., F. A. C. S., Washington, D. C.
Associate Professor of Surgery, Georgetown University Medical School.

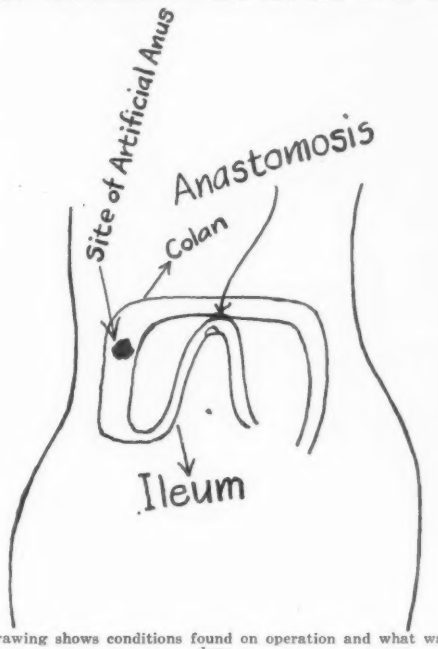
The patient, white, aged seventeen, was referred to me on June 20, 1930, from a city in Maryland. The following history was obtained: She has had the usual diseases of childhood, and, prior to January, 1928, has had no serious illness and no operations. She menstruated first in November, 1927.

Late one evening in January, 1928, while at her home, she was seized with abdominal pain and vomiting. She was taken to a hospital and operated upon at 6 o'clock the following morning for appendicitis. No drainage tubes were inserted, and she left the hospital after fifteen days with the wound apparently healed. Four days later the wound opened, and pus and blood were discharged. After draining for three weeks, she returned to the hospital and was operated upon again. The wound did not heal, and after an interval of six weeks, she underwent her third operation. After her third operation, she remained in the hospital for one month and was discharged with the wound still unhealed. One week after her discharge from the hospital, the wound commenced to bleed profusely, and she returned to the hospital, where the fourth opera-

*Read before the Medical Society of Northern Virginia, Maryland, and the District of Columbia, Raleigh Hotel, Washington, D. C., December 3, 1930.

tion was performed. After this operation, which was in June, 1928, fecal material commenced to discharge from the wound. This discharge continued until September, 1928, when she again entered the same hospital and was operated upon for the fifth time, but by another surgeon. After four weeks, she was discharged with the fecal fistula still present. In February, 1930, bowel movement by way of the rectum ceased, and from that time until I saw her in June, 1930, the fecal fistula served as an artificial anus.

EXAMINATION: June 20, 1930. The patient is a well-developed, thin, discouraged individual, who is very nervous and emotional, and who faints on the slightest provocation. She has been a recluse since September, 1928, and has refused to leave her home to take part in any enterprise which would involve her seeing other people. She is pale; her skin is clear. Estimation of her red cell count is 4



Drawing shows conditions found on operation and what was done.

million, and her white cells number 7 thousand. Her abdomen is flat, and an area to the right of the umbilicus is involved in a large ventral hernia, which is 4 inches by 4 inches in diameter. In the center of the hernia is an opening, measuring 1½ inches by 1½ inches, through which fecal material can be seen. The skin over the hernia is scarred and puckered from previous operations.

OPERATION: June 21, 1930, ether anaesthesia. The skin margin of the artificial anus was sutured snugly with catgut, and an elliptical incision was made which followed the direction of the shore of the hernia. The tissues included in this incision were dissected from the abdomen and lifted with the bowel attached at their center. The bowel was then separated from the overlying structures, and the artificial anus was found to involve the colon just below the hepatic flexure for one-half its circumference. The edges of the gut were trimmed and approximated by suture.

Fig. 1.

This reduced the lumen of the colon at this point to about one-half of what would be normal. In order to avoid tension on the sutures and stasis in the colon, a side to side anastomosis of the ileum and the transverse colon was done. The line of suture for the anastomosis was covered by omentum, and the intestines were returned to the abdomen. The end of a soft rubber drainage tube was placed near the anastomosis, and the ventral hernia

was repaired by overlapping the abdominal wall with four heavy silk mattress sutures, the lateral wall being tucked under the mesial wall. Imbrication continuous suturing of number one chromic catgut was performed, and the skin was closed with black silk.

A soap-sud enema was given on the fourth day, which resulted in a large stool and much gas. The drainage tube was removed on the fourth day. On the seventh day there was a free discharge of dark brown pus from the wound which has a strong colon bacillus odor. The patient was fed two tablespoonfuls of raspberry jam, and the dressings were searched for raspberry seeds. Seeds did not appear in the dressings, and it was concluded that there

Fig. 2.

was no communication with the bowel. At the end of the second week, the patient was able to take short walks, and she left the hospital on July 13 for her home.

I am indebted to Dr. Fred E. Coe, Roentgenologist, Georgetown University Hospital, for the pictures which accompany this article. They were taken on October 14, 1930, and explain themselves:

Fig. 1.—An X-ray of the intestines after a barium enema. It shows the anastomosis of the ileum to the transverse colon in the middle third. The barium passes freely into the last portion of the ileum, filling both the afferent and the efferent loops. It also shows some barium passing the constricted ascending colon which was the site of the former artificial anus.

Fig. 2.—Presented to show the increase in weight and the general physical health of the patient on October 14. The scar following six surgical operations is quite apparent, but is firm, and there is no hernia present.

Fig. 3.

Fig. 3.—A side view of the patient taken to expose the site of the scar and to call attention to the fact that there is no bulging.

Conclusion: This case suggests several interesting thoughts:

1. The five previous operations were performed at too short intervals.

2. The short circuiting of the intestine relieved the tension on the colon sutures and allowed healing to take place.

3. Pus that is contaminated with the colon bacillus resembles feces very closely, and the feeding of raspberry jam is a good test of the integrity of the bowel.

4. Heavy silk mattress sutures used in closing ventral hernia are suitable even when the wound becomes infected and even though it may take years to absorb them.

5. It is possible to take a neurotic, despondent, unhealthy girl, who had become a recluse, and by an operation restore her to her friends and her family in good health and in good spirits.

1835 *Eye Street, Northwest.*

MILK PROTEIN THERAPY IN EYE DISEASE.*

By H. W. CARTER, M. D., Washington, N. C.

The first use of albuminous substances for parenteral injection in disease was by Ludké who used deuteroalbumose in 1914.

A little later Schmidt injected cow's milk for the same purpose and demonstrated that albuminous substances have the power of producing in the body an action similar to that produced by the specific sera and vaccines.

All sera and vaccines contain albumen, and we can sometimes increase the action of the specific therapy by combining a non-specific with it.

But while specific therapy either furnishes the body with prepared antisubstances or excites it to manufacture antibodies, albuminous bodies are the sole factor in the non-specific.

Non-specific protein therapy can increase the specific function of the cell and, in cases in which the specific treatment cannot be employed, recourse must be had to the non-specific. Indeed, in many conditions specific serums and vaccines have been discarded in favor of non-specific protein therapy.

That foreign protein therapy is valuable in treating any infective focus was conclusively shown only recently by Clarence Porter Jones and Foy Vann in curing or benefiting 57 out of 64 cases of left-over infections, that is, infections in which the focus or foci had been removed as far as possible with old out-of-date typhoid vaccines.

The best and most frequently used foreign protein for parenteral injection in the treatment of eye diseases is cow's milk.

Since Schmidt first demonstrated its usefulness, many investigators and research workers have confirmed its value in the treatment of eye infections, and it has been used by many practitioners both in this country and in Europe in combatting serious ocular inflammation.

The value of milk protein therapy in the treatment of eye diseases is immensely increased by reason of the fact that we are dealing with an organ of special sense, as well as one composed of some structures which are practically inaccessible from without.

How does the intramuscular injection of cow's milk act in arresting inflammation in eye infections?

The explanation is not clear. Whether it is due to an increase in the leucocytes, protoplasm activation, irritative therapy, the production of fever, an affinity for the spleen, bone marrow and lymph nodes, or to a focal reaction in the area of the lesion, it does seem to have a special affinity for the eye and all of its structures when in a state of inflammation.

It probably has a similar affinity for foci of infection in other parts of the body, as cures of frontal sinus and other infections have been noted following intra-muscular injections of milk proteins.

Cow's milk should be placed in the water bath at boiling temperature for ten minutes and allowed to cool, after which it is ready for use.

The dose depends upon the age of the patient, children being given from 2 to 5 c.c. and adults from 5 to 10 c.c.

It is injected intra-muscularly in the gluteal region.

The injection is nearly always followed in from 6 to 12 hours by a violent reaction, such as pains, inflammation, swelling and possible abscesses at the site of inoculation, and by a chill, fever, rapid pulse, dizziness and a feeling of malaise, which usually subsides within 24 hours, but sometimes persists for 48 hours.

The injections have proven of special value in the treatment of gonorrheal affections of the eye, iritis—especially gonorrheal or rheumatic iritis—cyclitis, albuminuric retinitis,

*Read before the 35th annual session of the Seaboard Medical Association of Virginia and North Carolina, at Elizabeth City, N. C., December 3, 1930.

choroiditis of an infectious nature, corneal ulcers and infected traumatic injuries.

The injections should be followed by rest in bed in a dark room and by local treatment, such as atropine, dionin, and hot or cold applications.

Within 24 to 48 hours after the first injection, the local symptoms of pain, swelling and inflammation begin to subside, the patient becomes more comfortable and experiences a sensation of well-being.

As a rule, the symptoms continue to improve with subsequent injections.

The reaction and extreme discomfort following parenteral injections of milk have been a great drawback, and for this reason it has been very little used except in the worst type of cases.

Other albuminous substances, as ophthalmosan, aolan, caseosan, yatren-casein, etc., have been used in an attempt to reduce the general disturbances caused by milk, which, according to Haas, acted as a retarding factor in the process of healing. Haas conducted many experiments to win a compound from milk which would retain the healing effect of the protein substance without the accompanying disagreeable symptoms.

In the course of these experiments, he discovered that it was possible to increase the therapeutic effect of the protein substance, and he finally succeeded in producing a compound called vistosan, a milk derivative, which was homogeneous, durable and simple, and free from any of the objectionable features of milk or the other protein preparations previously used.

By the fortification of vistosan with strychnine Haas not only increased the therapeutic action of the protein, but obtained for the preparation a specific affinity for the eye, the strychnine not only acting as a stimulant and general corrective, but also exercising a selective therapeutic affinity for the nerve structures of the eye.

Vistosan is produced in the chemical laboratory, "Alemania," in Berlin—Wilmersdorf, and is distributed in this country by Pabst Chemical Company, of Chicago.

Vistosan 1 and Vistosan 2 are put in ampoules of 5 c.c. each.

Vistosan 1 contains 0.6 per thousand of strychnine glycerophosphorate and Vistosan 2 contains 1.0 per thousand of strychnine cacodylate.

In Vistosan 1 the composition augments the general healing effect of the protein substance, while in Vistosan 2 the admixture possesses a peculiar affinity for certain tissues of the eye, that is, of the iris and of the optic nerve when the latter is in a state of degeneration.

Vistosan, like milk, is injected intra-muscularly in the gluteal region with the patient in the recumbent position. The first two injections are best made at intervals of two days, after which they are given every third day.

Five injections are usually sufficient, though in some cases only two are needed. I prefer to use a 5 c.c. Luer syringe with a No. 22 needle 1½ inches long. Vistosan 1 is used in the treatment of retinal hemorrhage, thrombosis of the veins, choroiditis of an infective nature, optic neuritis, glaucoma, corneal ulcers, gonorrheal ophthalmia and infected wounds of the eye.

Vistosan 2 is used in the treatment of iritis, acute and chronic, irido-cyclitis and atrophy of the optic nerve.

My own experience with vistosan has been of short duration, but the results I have obtained have been very gratifying and I am thoroughly convinced of its usefulness in the treatment of eye diseases, especially those of an infectious nature. It is therapeutically more valuable than milk and possesses none of its disadvantages.

I have never seen any unpleasant reaction whatever from its administration, neither local pain, inflammation, swelling, nor any general disturbances, such as a chill, dizziness, headache or a feeling of malaise.

I have only noted a mild focal reaction in the eye, which was characterized by an increase of tears, relief of pain and arrest of inflammation.

It is said, however, that the injection is occasionally followed by a rise of temperature, which in no way interferes with its therapeutic action, but I have never seen a rise of temperature in any of my cases.

In serious corneal ulcers, iritis and irido-cyclitis, the pain is nearly always removed within 24 hours after the first injection, and the more acute the condition, the more prompt, as a rule, is the relief of pain.

In infected traumata of the eye the pain is

usually relieved by the first or second injection.

I have seen ulcers of the cornea which continued to spread and which resisted all other treatment respond promptly to vistosan, with relief of pain, arrest of inflammation and repair of the ulcer.

In iritis I have seen pupils, which failed to dilate satisfactorily in spite of the use of strong mydriatics, enlarge promptly, iritic adhesions give way and the exudate, become absorbed after one or two injections of vistosan.

In all serious cases of ocular inflammation, infected tonsils, abscessed teeth and other foci of infection should be removed when possible.

Atropine, dionin, hot or cold applications and other local remedies, when indicated, should be used, and in all except mild cases the patient should be confined to bed in a dark room.

It is my earnest belief that we have in vistosan a milk protein remedy free of all of the objections of crude milk, and that we should welcome it as a valuable aid in the treatment of eye diseases.

SIAMESE TWINS.*

By JOSEPH J. MUNDELL, M. D., Washington, D. C.

The case report of Siamese still-born twins at the fifth month is as follows:

Mrs. X, age thirty, consulted me in June, 1930, for attendance upon her pregnancy and confinement. Her family and past history were irrelevant. She was healthy, well developed and well nourished. There were no previous pregnancies. Her last period was in April, 1930, and examination revealed the uterus to be enlarged to about the size of a two months' pregnancy with no abnormalities in the pelvis. Blood pressure and urinalysis were normal and Wassermann was negative. With the exception of a slight bloody show on July 8th, the pregnancy proceeded perfectly normally in every respect until on the morning of September 11th when the membranes ruptured and that night she miscarried. The united twins and single placenta were expelled spontaneously. They presented by the four feet. Except for the fusion at the abdomen from the pubis to the xyphoid they were apparently well developed females.

The mother, but for a low grade fever for a few days, had a normal convalescence.

There is little of practical interest from an obstetrical viewpoint in fused twins except they are so very uncommon, not more than three or four dozen cases in the world's medical history having been born alive at term and gone on to maturity. Not a single instance is recorded of a prenatal diagnosis of the fusion. Their chief interest centers around an academic consideration of the cause, and even to this modern age it is unsolved. Mention of double monsters is made in medical annals of the earliest antiquity and ludicrous and extravagant explanations have been presented. In early times it was thought to be a diabolical ministration of the Gods for the sins of the day. That lunar influences were supposed to be exerted is seen, for one meaning of the word monster is moon calf. By many it was held to a hybrid resulting of carnal knowledge of the mother with an animal. Belief in maternal impressions are prevalent even to this day and age. Credulity and superstition have never been the peculiar possession of the lower type

of civilization only. The famous Siamese twins were not permitted to be exhibited in France for fear of maternal impressions. Only recently a well-known obstetrician received a letter from a fellow practitioner asking if it were possible for a woman to give birth to a dog.

De Lee, in his latest edition, says that,

*Read before the Medical Society of the District of Columbia, October 29, 1930.

though he does not hold to the belief of maternal impressions, yet he does think that shock and worry may produce vascular and nutritional disturbances in the endometrium which may seriously affect the growth of the ovum, simply a dressing up of the phraseology of the ancient belief.

The modern scientific explanation for the occurrence of monsters is divided into two main theories. One school, notably led by Stockard and Lewis, believes that it is due to pathologic metabolism of the parents. In animal experimentations they have produced malformations by treating ova with magnesium chloride, alcohol, ether and other agents. Another theory propounded by Mall, after extensive search, is that the monstrosity is due to a normal ovum having a faulty implantation in the uterus. He states that in microscopic stages human monstrosities are unknown. And so among zoologists the battle wages, each side having equally ardent proponents and opponents. Suffice it is to say the question is still unsettled.

1616 *Rhode Island Avenue, Northwest.*

ENTEROCOCCUS PERITONITIS AND PLEURITIS.

By FREDERICK W. SHAW, M. D., Richmond, Va.
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Infections due to the enterococcus appear to have been seldom recognized in this country. DeVel and DeGowin,[1] in reviewing the literature on these infections, did not cite a case from this country.

The enterococcus was first described by Thiercelin,[2] in 1899, and was considered a normal inhabitant of the gastrointestinal tract. Later, he isolated it from pus from the meninges in two cases of cerebrospinal meningitis and from the pus from suppurating appendicitis. The organism was described as somewhat pleomorphic, sometimes appearing as a lanceolate diplococcus similar to the pneumococcus and sometimes as a streptobacillus resembling chains of diplococci.

Houston and McCloy[3] found the enterococcus in a variety of conditions which they classified into the septicemic group, the trench fever group and the myalgic group. Enterococci were isolated from the blood, urine and sputum in a number of these cases.

Tricoire[4] summarized the cases in which the enterococcus had been found. These conditions were as follows: gastro-enteritis and mucous colitis in children, "intestinal grippe," infections of the biliary tract, appendicitis, peritonitis with associated scarlet fever, in the blood of a patient with appendicitis, osteomyelitis, urethritis, respiratory infections, cardiovascular infections, arthritis, and meningitis.

Fidler[5] reported a case of septic enterococcus polyarthritis.

DeVel and DeGowin[1,c] reported a case of peritonitis in a child. The peritoneal fluid showed a gram-positive diplococcus and diplostreptococcus. The organism was first mistaken for a pneumococcus.

The year 1929 brought one report of a case with destructive epiphysitis of the right femur due to the enterococcus, by Manfredi;[6] enterococcus infection simulating endocarditis lenta, by Tidow;[7] a fatal case of myocarditis with enterococci, by Duvernay and Gerbay,[8] and a case of septicemia with slow endocarditis caused by the enterococcus, by Cadi.[9]

There is considerable variance of opinion as to the entity of the enterococcus. Most bacteriologists consider the enterococcus identical with the Micrococcus ovalis of Escherich and the Streptococcus fecalis of the English and American workers. Most of the textbooks on pathogenic bacteria in this country do not mention the enterococcus.

Bagger[10] isolated and studied 92 strains of the enterococcus from peritonitis and 58 strains from normal intestines. He found them to be gram-positive diplococci in the body, while in fluid mediums they were short chains. The enterococcus grew well on ordinary mediums and was a facultative anaerobe. It grew well in sterile ox bile with 1 per cent peptone and was exceptionally resistant to heat, withstanding 60° C. for one-half hour. Indol was not produced. Gelatin was liquefied by 10 per cent of the strains. All of the strains fermented (with acid production, but no gas) dextrose, mannose, galactose, mannite, maltose, levulose, lactose, sucrose, trehalose, dextrin, glycogen, salicin, amygdalin, and glycerin. None of the strains fermented dulcite, adonite, inulin, or starch. They varied on sorbite, arabinose, rhamnose, xylose, and raffinose. He found the organism to be moderately pathogenic for rabbits and mice, but not for guinea-pigs.

Dible[11] in studying aesculin fermentation and hemolysis by enterococci, tested 247 strains of streptococci from various sources, using the

medium of Harrison and van der Lack (peptone 1.5 gm., sodium taurocholate 0.5 gm., aesculin 0.1 gm., ferric chloride 0.05 gm., water 100 c.c.). He found 116 to be aesculin positive and heat positive (resist 60° C. for fifteen minutes); 90 to be aesculin negative and heat negative; 31 to be aesculin positive positive and heat negative, and 10 to be aesculin negative and heat positive. He concluded that the aesculin fermentation seems to be very little more than an indicator for Weissenbach's criterion.[12] Dible further found that most of the heat resistant strains (enterococcus) were non-hemolytic, and concluded that the enterococcus is typically a non-hemolytic organism, though some strains when freshly isolated show pseudohemolysis under suitable conditions.

The organism isolated from the fluid in the abdomen and pleural cavity of the case herein reported appeared as diplococci on smear from the fluids. They appeared as diplococci and short chain stretococci in liquid cultures. On rabbit blood agar plates, the colonies appeared quite similar to streptococcus colonies, at first, but grew to be somewhat larger, and later became opaque and of a whitish color. A green ring formed around the colonies, thus differing from the enterococcus reported by DeVel and DeGowin[1,c]. The organism was not bile soluble and was heat resistant. It produced acid, but no gas, in lactose, mannite and salicin; gelatin was not liquefied; milk was coagulated.

Report of Case

A. B. S., white female, single, age twenty-two years, was admitted to Memorial Hospital, October 3, 1928, complaining of pain in the back and right side. This condition had existed for two days.

Examination showed a well nourished, rather oedematous, young woman with marked dyspnoea. There were a few rales in the bases of the lungs. The heart was slightly enlarged and the sounds were clear. The rhythm was regular. There were no murmurs. The abdomen was distended with fluid and there was oedema of the upper and lower extremities.

The blood count showed: erythrocytes 3,880,000; hemoglobin 64 per cent; leucocytes 25,600 with 98 per cent polymorphonuclears.

Examination of the urine: cloudy; acid; sp. gr. 1.010; albumen abundant; sugar and acetone negative. Pus 4 plus; erythrocytes few; hyaline and fine granular casts few.

The temperature ranged from 101° F. to 103.8° F.

On October 14, 1928, dulness was elicited at the base of the right lung and the breath sounds were suppressed. There was a friction rub above this area.

On the fifteenth there was continuous vomiting of bile-colored fluid.

The patient died at 9:35 A. M., October 16, 1928.

Postmortem Examination: The peritoneal cavity and both pleural cavities contained a seropurulent fluid exudate, approximately 2000 c.c. being present in the peritoneal cavity and approximately 500 c.c. in each pleural cavity. Smears of the exudate in both thorax and abdomen revealed a gram-positive diplococcus. Lymphoid hyperplasia was present. There was pronounced fatty degeneration of the liver. The kidneys showed interstitial oedema, scattered foci of interstitial round cell infiltration; glomeruli showed but little injury, except for thromboses in a few with adhesions to Bowman's capsule; tubules in general were dilated, containing cellular debris, and were lined by partly degenerated epithelium. In sections stained with scarlet red a large amount of fat was seen in the tubular epithelium, for the most part filling the cytoplasm and obscuring the nucleus. There was passive congestion and parenchymatous degeneration of all organs. No focus of infection was discovered.

Comment

The addition of another case of parenteral enterococcus infection to the literature is important in that it shows that this condition is not, perhaps, as rare as the small number reported would indicate. The common mistake is, undoubtedly, the tendency to regard this organism as an atypical pneumococcus or a streptococcus. In this case the organism was first reported as a streptococcus viridans, but the character of the growth on blood agar plates two days later led to further investigation of the growth with the results reported above.

My thanks are due Dr. Charles Phillips for the autopsy notes.

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ARACHNIDISM—REPORT OF TWO CASES.

By JUDSON T. VAUGHAN, B. A., M. D., Ashland, Va.

Arachnidism, or poison from a spider bite, is considered rather rare in this section of the country. Dr. Emil Bogen, of the Los Angeles General Hospital, has collected one hundred and fifty cases in the period from 1916 to 1926. In Virginia within the past few years a few cases have been reported, several of which had a fatal termination. The first case reported was by Dr. Adner Hopton, Clinton, N. C., one hundred years ago and the first death occurred in the same neighborhood and was reported by Dr. John M. Dick, in "*Insect Life*," January, 1889.

The insect causing the trouble is the Lacrodectus Mactans or commonly called the Black Widow. It is coal black in color with red, yellow, or red and yellow markings. These markings consist most constantly of one the shape of an hour glass on the ventral aspect of the abdomen. The female of the species is the only one that is poisonous and is often an inch in length. The male is about one-fourth the size of the female and is often devoured by the female, hence the name Black Widow. It is also called the shoe button spider, the hour glass spider, and the T-dot spider. This spider is quite common in the Southern States but has been reported as far north as New Hampshire.

The belief in the poisonous nature of this spider is of widespread knowledge. Dr. C. Mart Merrian has made the following statement, "Whenever I have questioned Indians about the spider in California, they uniformly rank it with the rattlesnake in poison. To poison their arrows they mash the spider and rub the points of their arrows in it. Sometimes this is the only poison used, and at other times it is one of several things used to make the poison."

A good many of the cases have occurred in outdoor privies and the insect is usually found in old stumps, under stones or wood that have lain for a long time, under shocks of wheat or oats, and in dark corners of old buildings. The site of the bite shows no local reaction, no swelling, pain nor tenderness, and the constitutional symptoms begin in from one-half to one and a half hours. The symptoms reach their peak in a few hours and then gradually subside.

I have only seen two cases and, strange to relate, they occurred within ten days of each other although eight miles apart. In conversation with various men in the profession, I find that the cases are comparatively rare; many men practice a lifetime without seeing a single case.

V. T., male, age sixteen years, was apparently in perfect health. While in the living room of a country farmhouse, he felt a sudden prick on the left arm, at 7 P. M. The arm was numb for a second and then was normal. No insect was seen. At 7:30 P. M., patient began having pains in the lower abdomen which increased in severity. By 8 P. M. he had board-like rigidity of the entire abdomen with general tenderness, nausea, and vomiting and presented a picture of a patient acutely ill. There was no temperature and a pulse of 70. Epsom salts had been taken before I saw the patient. Hot applications applied to the abdomen gave some relief and the pain and rigidity gradually subsided. The next day the boy felt good except for pains in the knees which lasted several days. Questioning him the day following the acute pain he remembered being bit. This established my diagnosis. The onset was too rapid and the tenderness and rigidity not enough localized for any surgical condition.

R. S., female, age fifteen years, was bit on the right gluteal region while in a pit privy away from home, at 1:30 P. M. Immediately the right leg began to pain her slightly, the pain increasing in severity, and at 3 P. M. she began to have pains in the abdomen. When seen at 4 P. M., patient was in intense pain with board-like rigidity of the abdomen but most of the pain in the right thigh. The pulse was 80, temperature 98. She had been given whiskey and soda. A hypodermic of a fourth grain of morphine and one hundred and fiftieth grain of atropine eased the pain but did not give relief. A second hypodermic of morphine in thirty minutes gave relief. She had no pain that night and slept well. The next day she

was nauseated and vomited several times but had no rigidity or tenderness of the abdomen. For several days she complained of vague pains throughout the body but these gradually disappeared.

Treatment of this condition consists of relieving pain and combating the acidosis caused by vomiting and starvation. Morphine is needed for the pain, glucose and saline for the acidosis.

The deaths reported have largely occurred in children. An antibody is formed in the body of the patients bitten and has apparently been used sucessfully in the treatment of the acute cases.

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COD LIVER OIL: ITS VITAMINS AND THOSE OF SOME OTHER FOODS.*

By JOHN C. ECKHARDT, M. D., Washington, D. C.

This is rather a presentation of a number of thoughts, than a definite talk on any one subject. Not being a biological chemist, nor a specialist in the present accepted meaning of the term (pediatrics being general medicine as practiced among children) may I paraphrase Voltaire and advise you to be unconvinced and uncomfortable rather than convinced and ridiculous.

First, cod liver oil promotes growth, increases resistance to infection, prevents and cures some varieties of ophthalmia, increases reproductivity and lactation up to the normal, prevents and cures rickets. All of this is due to vitamins A and D.

Now butter contains both of these substances,—about one-twentieth of the vitamin A and one-two-hundredth of vitamin D, so that the average child getting his normal share of butter is getting considerable vitamin A and D. If to this we add cod liver oil, and if we are not meticulous in the care of the cod liver oil, allowing it to become rancid, then we are stepping over the danger line as far as fatty acids are concerned. Our U. S. Pharmacopeia fixes the fatty acid content of cod liver oil at not over 1.41 per cent, whereas cod liver oil prepared by the rotting process contains 12 to 14 per cent, so that in cod liver oil that is not well refrigerated the fatty acid content rises. Cod liver oil is rated 97.7 per cent on digestibility, no other food approaching it. If cod liver oil is kept in a dark container at 70 degrees F., the vitamins are retained and the fatty acids do not increase. On the other hand, if exposed to the light and kept in a warm place, not only do the fatty acids increase, but vitamin A is markedly diminished if not lost altogether. The vitamin D from cod liver oil does appear in mother's milk. Sunshine or the ultra-violet ray will to a large degree take the place of vitamin D, making it very apparent that the really essential vitamin in cod liver oil is A.

In spite of or because of these factors, I strongly urge a good grade of cod liver oil well kept and in doses not exceeding one teaspoon daily, until puberty.

SUNSHINE: Why do tropical peoples have dark skins? To protect them from sunshine. Therefore, it must be possible to get too much sunshine. The skin coloring or sunburn is due to a pigment called keratin. Whether the sun changes the character of the keratin or whether the keratin is increased, the biological chemists cannot say at the present time. Certain it seems that a good coat of tan must protect or keep out the beneficial rays of the sun. If we want the maximum benefit of the sun, i. e., increase metabolism, fix calcium in the blood stream, and so forth, we will allow only short exposures to the sun and stop just short of tanning.

Back to vitamins once more. Vitamin A promotes growth, increases resistance to infection, prevents and cures certain forms of ophthalmia, and increases reproductivity and lactation. This vitamin occurs in corn, beans, carrots, sweet potatoes, butter, lettuce, cod liver oil, and milk. If these vegetables are cooked in the presence of atmospheric oxygen, the vitamin A content is tremendously decreased or entirely lost. How many of us have our vegetables cooked in airtight containers to save this most necessary vitamin?

Many people add soda to their cooking vegetables to make them more green, but soda destroys vitamin B, the vitamin that increases appetite and digestion, promotes growth, and protects against polyneuritis and pellagra.

Now just why do we cook green vegetables any way? Certainly not because they must be cooked because there are too many green vegetables that we eat without cooking. I

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believe that the really great factor in cooking green vegetables is to sterilize them. This has been done other ways—and certainly we run no risk of destroying the vitamins.

Speaking of cooking makes it necessary for me to mention several interesting facts that have come to my attention during the past six years. I have abandoned the laborious preparation of cream of wheat and other cereals by cooking two, three, and sometimes four hours, and cook them only thirty minutes, with so far not only no bad results but evidently no difference in the ability of the child to take care of those cereals so prepared. You have most likely, and mothers have most certainly, sworn at this procedure, and those so unfortunate as to have a child with a pylorospasm who must be fed a thickened formula prepared with rice flour are to be pitied. Personally, I think this pure bunkum and to back it up I will say that I have not had one case of pylorospasm go to operation in the past six years and have had no mortality from this condition. Perhaps I am lucky or my experience is too limited. It embraces well over 100 cases.

I believe some of these procedures belong in the archives of time, along with our top milk formulas of not so many years ago, when it needed an expert mathematician to figure out formulae.

If I can leave one idea it would be this: Simplify and debunk child feeding and strive to develop a dietary that needs no peaks, such as we have exemplified in orange juice, cod liver oil, wheat germ, rice polish, and so forth.

1835 *Eye Street, Northwest.*

A CASE OF UNILATERAL EXOPHTHALMOS FOLLOWING THYROIDECTOMY.

By JOHN PAUL EARNEST, M. D.,
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and
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Unilateral exophthalmos occurring in case of exophthalmic goiter before operation is not rare, and many cases occur as one of the first symptoms of the disease. The occurrence of this condition following thyroidectomy, is, however, a very unusual condition and may cause confusion, the presence of the pre-existing thyroid disease being disregarded.

Zimmerman, in reporting a series of eight cases in which exophthalmos developed or became worse following operation, reported a case of unilateral exophthalmos developing after operation.

The following case report is that of a woman fifty-four years of age who developed a unilateral exophthalmos following a thyroidectomy in which sufficient thyroid tissue was removed to lower the basal metabolic rate to normal and relieve, we believe, all clinical symptoms of the disease.

The patient, a government clerk, was first examined September 4, 1929. She gave a history of the onset of her symptoms in March, 1929. The chief complaints were nervousness and loss of weight, having lost fifty pounds in weight during this period. She was extremely nervous, emotionally unstable, and gave a history of suffering more than usual from the heat of the summer. Weakness of the knees and cardiac palpitation were also given as symptoms.

Physical examination revealed a symmetrically enlarged thyroid with bruits over the superior poles of the gland. The quadriceps femoris muscle was weak. There was a definite tremor of the fingers of the extended hand. The heart rate was 100, the systolic blood pressure was 160 and the diastolic pressure 80. Her temperature was 98.3. No eye signs of exophthalmic goiter were present.

A moderate anemia was present, the red cell count being 3,872,000. A faint trace of albumen and a few hyaline casts were present in the urine. A Wassermann test was negative. A basal metabolic rate taken September 25th was plus thirty-three, after having received Lugol's solution for ten days.

She was admitted to the hospital on September 15th, was given Lugol's solution in ten minim doses, three times a day and a high caloric diet.

Thyroidectomy was done on September 30th. The thyroid was symmetrically enlarged and very vascular. It was enlarged to four or five times the normal size and gave every appearance of the thyroid in exophthamic goiter, which was later corroborated by the histological study. Adenomata were not found.

Lugol's solution was given after operation in ten minim doses three times a day for a period of six days and was then given in doses of ten minims once a day over a period of two months. She returned to work on December 1, 1929.

She obtained relief of all of her symptoms in two months' time. Her weight increased and she "felt fine." A proptosis of the right eye was first noticed in March, 1930. Lugol's solution was again advised but was only taken for three weeks, a dose of ten minims being taken daily.

During the months of June and July the patient lost six pounds in weight, which frightened her. A basal metabolic rate taken August 4th gave a reading of plus four. Examination at this time revealed a slight nervousness evidenced in an inclination to giggle and in purposeful but useless movements. This was attributed at the time to the heat of the summer which was very severe and to a nervous strain the patient had been under in her home. The proptosis of the right eye was marked and complained of bitterly by the patient.

The exophthalmos was present in October, 1930, but was not as severe as in August. A metabolic rate taken on October 19th was zero. Her weight was one hundred and twenty-four pounds during the summer and one hundred and thirteen pounds before the operation.

The mechanism causing exophthalmos in exophthalmic goiter, either bilateral or unilateral, remains unknown.

The most interesting fact in this case history is the development of the exophthalmos in a patient who was relieved of all other symptoms of exophthalmic goiter, except for a short period in midsummer when her slight loss of weight and nervousness might be explained on the basis of a small amount of toxic secretion from the thyroid gland, or attributed to the heat which was severe, and to a very unpleasant domestic situation. As this period followed the exophthalmos by three months, and could easily be explained by the heat of the summer and unpleasant domestic situation, the cause could not be determined, though we concurred in attributing the loss of weight and nervousness to the heat and unpleasant home surroundings.

This patient, contrary to the cases reported in Zimmerman's series, received iodine after operation for a prolonged period. Whether a still longer period would have prevented the occurrence of exophthalmos cannot be determined. It is possible, as the cases reported by Zimmerman showed no other symptoms of exophthalmic goiter following operation, and there was little evidence in the present case, that the etiologic factor causing the stimulation of the thyroid in exophthalmic goiter may be directly responsible for the exophthalmos.

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INTRAVENOUS UROGRAPHY.*

By A. A. CREECY, M. D., Newport News, Va.

During the past year a valuable addition to the armamentarium of urology has been made by the introduction of an intravenous drug known as uroselectan which is excreted by the kidneys in sufficient concentration to cast a shadow of the entire urinary tract on X-ray plates. The substance was synthesized by Professors Binz and Rath and clinically applied by Swick in the Clinics of von Lichtenberg and Lichtwitz, of Germany. The chemical name is sodium-2-oxo-5-iodo-pyridine-N-acetate. It has an iodine content of 42.2 per cent in a combined state and no free iodine is liberated in the body or during its excretion. It was introduced in American Clinics during 1930 and has been reported on by many of these in recent months with favorable results. A summary of the report of Braasch and Bumpus to the Council on Pharmacy and Chemistry of the American Medical Association is as follows: "As a substance for injection through the ureteral catheter, sodium-2-oxo-5-iodo-pyridine-N-acetate is the best material so far obtained; used intravenously, it often helps in the diagnosis when ureteral catheterization is impossible; however, it is not secreted in the same concentration by all kidneys of apparently equal function and hence is at times disappointing; as a substance for renal function test, its worth is not yet proved."

Uroselectan is a white crystalline substance, readily soluble in water. Forty grams is the dosage for a normal adult but lately it has been advised to increase this to sixty grams to obtain clearer delineation of the urinary tract. The substance is administered to children in correspondingly smaller doses. Uroselectan is dissolved in doubly distilled water to a volume of 110 c.c., filtered, and then sterilized in the autoclave for twenty minutes. The solution then has a total volume of approximately 100 c.c., and is administered immediately on cooling. It should not be allowed to stand. It

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should be given slowly and to accomplish this I have preferred to use a very small bore intravenous needle on a 50 c.c. syringe, giving half the dose in one arm and, after refilling the syringe, injecting the vein of the other arm. The syringe method is preferable to gravity to avoid the possibility of foreign body reaction. Following the intravenous administration, the patient is taken to the X-ray room so that the first picture can be made within fifteen or twenty minutes. Radiographs are again made at forty and eighty minutes after injection and again at longer intervals if indicated by diminished function or in the presence of obstruction. Better films are obtained by compression with a dilated rubber bag over the bladder five or ten minutes before exposure. In normal cases 85 to 95 per cent is excreted within eight to twelve hours and from 45 to 65 per cent is excreted during the first two hours and the best urograms are therefore obtained in this interval. The clearness and value of resulting pictures depend on several factors. Non-functioning kidneys cast no shadows and organs with impaired function cast correspondingly fainter shadows. Lack of visualization may mean a non-functioning kidney, temporary inhibition or congenital absence. The dynamics of the pelvis and ureter must be considered for, if the radiograph is made during systole or contraction, the parts will not be so well filled as they are in diastole. The best results are seen in those cases of obstruction as the drug is then present in greater concentration. Cystograms are usually very well shown, outlining the bladder clearly and showing filling defects when present, thus making this method most ideal for diagnosis of bladder lesions. Compared with pyelograms made in the usual manner, those obtained with uroselectan are not so prominent and fail to delineate the outline of the minor calices as well. For this reason, early lesions of tuberculosis and tumors may be overlooked by this method. Ureterograms obtained with uroselectan are usually poorly defined unless obstruction is present. The drug passing through the kidney parenchyma intensifies the kidney shadow giving an idea of its outline, size and position.

The method is of particular value whenever mechanical instrumentation is dangerous or impossible as in cases of urethral stricture, prostatic hypertrophy, urinary fistula and impassable lesions of the ureters; also in children and in those who refuse cystoscopy. However, we must not let our enthusiasm for a new procedure lead us to accept its findings as absolute. A majority of urological diseases are caused by two factors, obstruction and infection. Uroselectan will usually indicate the former but it will not tell us the degree of infection nor isolate the offending organism and no urological diagnosis is complete unless this is done whenever possible, nor can we plan a sound surgical attack without this knowledge and that of renal function. It is true the latter can be estimated with the secretion of the dye but the older methods are more familiar and comprehensive to us at present. The surgery of a simple hydronephrosis may be quite different from that of a badly infected one, and a colon bacillus pyelitis is treated quite differently from renal tuberculosis. Uroselectan should be very valuable in cases of prostatic hypertrophy. One reason for our present-day success in these cases is the thorough study we afford them before operation. However, they are not particularly suited to cystoscopy except for inspection of the prostate and bladder, as it is frequently impossible to catheterize the ureters to obtain pyelograms and subjects them to unnecessary reactions. But these cases generally have been sick for some time and the kidneys have been working against a heavy load so that back pressure changes in those organs have taken place. It would be nice to visualize these changes before operating; to see just how much the pelves and ureters have dilated; whether one kidney has greater damage than the other or has become inactive, and whether or not there are any congenital abnormalities. This may be done very simply during the pre-operative care of the patient without overtaxing him, by the use of uroselectan, thus affording us a visual knowledge of the urinary tract in addition to that of its function. In cases of prostatic hypertrophy this may become as routine as blood urea determinations.

The method is applicable to urological diseases of childhood as physicians are somewhat hesitant in referring these cases for cystoscopy which usually must be done under general anesthesia. Uroselectan may be administered, however, with little inconvenience to the child and the radiographs obtained may be of great value in reaching a diagnosis easily. Hyman has reported a series of twenty-two cases in children, ranging from six months to twelve

years of age, with no toxic reactions and with satisfactory results. It is valuable for the late study of the kidneys and ureters in children in whom the ureters have been implanted in the sigmoid for exstrophy of the bladder. Patients with extremely irritable bladders, such as we encounter in renal tuberculosis, lend themselves well to this method.

There are few contraindications for the use of the substance. As the drug must be almost entirely eliminated by the kidneys, it is, of course, unwise to give it in the face of impending uremia. Blood urea determinations and renal function tests should be done before applying it in questionable cases but unless these tests are very poor, the drug may be given safely. One of my cases had a blood urea of 64 mgm. per 100 c.c. but showed no signs of reaction. von Lichtenberg, Swick, Kretschmer, Hyman, and others have used it many times without severe reaction. I have seen reference to only one case of fatal reaction. During the injection the patient sometimes experiences sensations of warmth and thirst and the face becomes slightly flushed. A few complain of nausea and feel a slight pain in the arm. If unpleasant reactions occur, they are more liable to do so during or soon after the injection.

I have used the drug in only seven selected cases as follows: one case of unilateral hydronephrosis complicated with cerebrospinal lues; one case of chronic cystitis with retention and locomotor ataxia; one normal case for diagnosis; two cases of prostatic hypertrophy; one case of bilateral renal tuberculosis with prostatic hypertrophy and double ureter and pelvis; and one case of bilateral pyelonephritis in a fourteen year old boy. There were no reactions. The resulting urograms were disappointing compared with the older method and at first glance seemed to be of little value. However, after studying them more closely, I must say they aided me in each instance in handling the case, especially when they were considered in light of the history and clinical findings. I think the method is of undoubted value in selected cases. There is apparently little danger of toxic reaction if the drug is carefully given, with a few necessary precautions already outlined in selection of the cases. Its field of usefulness will increase rapidly but it will continue to be used mostly by urologists and roentgenologists for sometime.

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Elizabeth Buxton Hospital.

Correspondence

"Doctors Under Fire."

EDITORIAL NOTE:—The following letter, which up to this writing has not been published, is in reply to a recent Editorial, and is voluntarily prompted by the author because the newspaper in question did not feel it incumbent to make any explanation of its unwarranted attack upon the medical profession, though its management was personally seen and consulted several times by the President and other members of the State Society.

The facts are that the Editorial was apparently in the nature of a book-review, but was interlarded with random deprecatory allusions to the medical profession, which must have been the personal views of a substituting writer, who at the time was acting for the Editor, who was sick at home, and attended by a physician.

At any rate, it seems but just to conclude, that in the attempt to be fair to one person's views, the substituting editor, the newspaper management was willing to be unfair to the views of many, without further comment.

The only courtesy extended to the complainants was an offer to open the newspaper columns to a discussion of the subject by physicians, but this was declined.

FEBRUARY 3, 1931.

TO THE EDITOR OF THE TIMES-DISPATCH:

There appeared in your issue of December 26th, last, an editorial under the title "Doctors Under Fire." The editorial was somewhat in the form of a review of T. Swann Harding's recent book, *Fads, Frauds and Physicians*. Even if only incidentally, some pretty hard blows were directed towards the medical profession. Perhaps it is the modesty of members of the medical profession or the futility, in their opinions, of newspaper controversy when led by themselves, that explains the silence of the doctors of the state in this matter.

It is not my purpose to attempt to defend the doctors on the one hand nor on the other

to take sides with Mr. Harding's point of view, although I think the use of the word "leeches" in the opening paragraph of your editorial without an explanation of its historical significance was unfortunate. In view of the discussion provoked by Mr. Harding, I believe it will be of especial interest to the readers of the *Times-Dispatch* to hear of certain steps the medical profession of this state have been quietly but thoughtfully taking which appear to be of far-reaching importance both to the profession and to the people of Virginia.

There came from the practitioners of the state themselves a little over three years ago a movement to provide for members of their profession opportunities for continuing their education while engaged in practice. The merits of great medical centers in this and other countries for those who could profit by this form of after-graduation instruction was recognized, but methods for bringing instruction to the "door steps" of the physician was the new aim. Progress both in theory and practice in the medical sciences is so rapid that it was recognized that whether the doctor graduated twenty-six years ago or two years ago, he was soon out of touch with advancing thought, even concerning the treatment of common diseases, unless study was continual. The ideal was the conception of medical education as a process life-long in extent and the provision for taking the opportunity for continuing education to every physician in the state.

The rapidity with which the idea of post-graduate education has spread among the members of the profession in this state is noteworthy. The Medical Society of Virginia at each of its most recent annual meetings unanimously indorsed the post-graduate education idea and took steps to put it into operation in some practical form. Excerpts from minutes of the recent meetings of the Society and from the writings of Society officials will doubtless best reveal the profession's interest and determination in this matter:

"* * * The Medical Society of Virginia, by its action last year, assumed the responsibility and recognized its very definite obligation to its members to assist them in this continuing medical education. Furthermore, it has made this its continuation work, and it is believed as a professional movement, it is the greatest single constructive contribution that organized scientific medicine can make to professional practice * * *."

At the same meeting, the Department of Clinical Education, a division of the Medical Society, reports that

"Continuation medical study after graduation is, and has been, and will be the main work of this Department, for as the profession keeps itself educated so will its standards and successes continue to be more perfect and more permanent. * * * Types of diseases change, clinical methods vary, and a new therapeusis is always to be studied * * *."

The final message of the retiring chairman of the Society's Department of Clinical Education, who is now the President of the Society, issued since the meeting in Norfolk, is devoted almost exclusively to the subject of post-graduate education:

"At the last annual meeting in Norfolk," he writes, "the principle of adult education as related to the profession of Medicine was definitely established * * *

"Contributing very greatly to the complete success of this plan in the future was the announced hearty cooperation of the Medical Department of the University of Virginia and the Medical College of Virginia through their representatives * * *

"* * * The necessity for Continuation Education for Practitioners is officially recognized and endorsed again after a year's experience. * * * It is something we all need if we are to keep in touch with the trend of modern medicine * * *."

"All graduates, specialists included, need this 'reconditioning process.'"

The new chairman of the Society's Department charged with responsibility of carrying on this new form of instruction is equally interested and optimistic:

"We are determined," he writes in his first message, "to carry on the work (of post-graduate education), systematically and cheerfully, going if possible, into each of our Councilor Districts. The State Society is well organized and more of a unit in purpose than ever before. * * *

"It is encouraging to know that we have already received requests for Clinical Meetings in several sections where they have not been held before, and volunteer offers from outstanding physicians to take part in these meetings."

In recent weeks a joint committee composed of an equal number of representatives from the Medical Society of Virginia, the Medical College of Virginia and the Department of Medicine of the University of Virginia has been appointed to assist the Society in formulating and putting into effect specific educational programs in Virginia in the field of post-graduate medical education.

Thus a well organized program for post-graduate medical education, inaugurated and sponsored by the physicians of this State, is well underway in Virginia. It involves the co-

operation of the three institutions most responsible for medical education and practice, the Medical Society of Virginia and the two state medical schools. Plans contemplate taking competent instruction into every section of Virginia by a variety of methods, including lectures courses, clinical demonstrations and extended medical library service. Hospitals of the state have offered their cooperation and facilities.

A distinguished scientist, not a member of the medical profession nor of the Medical Society of Virginia, observing the progress of the Society's efforts at post-graduate medical education stated that in his opinion the Society was taking the most forward step which it has ever made in its entire history.

G. Baskerville Zehmer,
Director, Extension Department.
University of Virginia.

Dr. Fishbein's Viewpoint of the Harding Book.

Richmond, Va.,
February 12, 1931.

To the Editor:

A few weeks ago, the *Richmond Times-Dispatch* carried an editorial which was inimical to the medical profession in its discussion of a book recently published by T. S. Harding. I understand that a committee of physicians interviewed the editor and he has promised to write a more favorable comment on modern medicine in the near future.

In the meantime, I wrote to Dr. Fishbein for a copy of his review of this book. It occurred to me that possibly this review would be of interest to the medical profession and you may care to publish it in an early issue of the Virginia Medical Monthly. This article was published recently in the *Saturday Review* and I am enclosing it for your perusal.

Wm. H. Higgins.

"FADS, FRAUDS AND PHYSICIANS"
By T. Swann Harding
Reviewed by Morris Fishbein, M. D.

"Mr. T. Swann Harding is a chemist. It is a pity he never completed a medical course and practiced clinical medicine. Had he had the responsibility and with it, the experience of taking care of a few patients, his point of view would, of course, have been entirely different from that which he adopts in his book. He reflects here neither the views of a competent investigator, a sociologist, a political economist, or an uninformed patient. He reflects rather the views of a person who has read a vast amount of medical literature and economic contributions in the field of medicine who is having a terrible time in digesting what he has taken. The output is in the form of what physicians call 'indigestible residue.'

"Mr. Harding apparently cannot tolerate criticism. One needs merely to have remarked at some time or other, that something said by Mr. Harding was silly or unscientific in order to have Mr. Harding call attention frequently to that fact in an abused, petulant, ironical, and cynical manner. This I found by consulting the references to my name in his index.

"In 'Fads, Frauds and Physicians,' Mr. Harding has elaborated a number of essays contributed by him at various times to various publications. He has had the experience of being turned down by some of the best periodicals in the country and he resents it. On the other hand, his views have been published by several publications known as socially minded in their point of view. From the material thus assembled and with the addition of numerous literary references, he has compiled this tone

"The writings of Mr. Harding are marked primarily by two attributes—he is exceedingly verbose and remarkably uninformed. He accuses medicine as practiced today, of being unscientific in many respects. The accusation he presents as though it were a bolt from the blue. He will not find a single physician to disagree with him, yet he takes it for granted that all physicians will disagree with him. No one knows better than physicians themselves the limitations of their science, but they are not running around in rings shouting about it; they are doing more than anyone else to overcome its limitations. Mr. Harding is inclined to discount the art of the practice of medicine. Any physician of considerable experience recognizes that the art of the practice of medicine, humanity being what it is, is about as important at the present time, as the science. Physicians recognize that the human being consists of both the mind and the body. They realize that the mind controls the functions of the body in many respects. They attempt scientifically to control the mind, in this way differing from metaphysicians, mind healers, and similar empiricists who attempt to control the body entirely by the mind. This does not, however, satisfy Mr. Harding. Being a chemist by trade, he apparently wishes the physician, in his study of disease in the human being, to bring about as certain a response as occurs when silver nitrate is added to a solution of sodium chloride. What a terrible world it would be if that were invariably possible.

"Mr. Harding is convinced that a considerable number of physicians are incompetent. Again, he will find physicians generally agreeing with him. Incompetence in every profession in the United States is a by-word. It represents the youth of our civilization. Thirty years ago there were more medical schools in the United States than in all of the rest of the world. Today the number has been cut to less than one-half, and the standards have been raised to a point which will insure a higher type of scientific physicians for the future. The physicians themselves brought about the reform.

"Unfortunately, with the advance in medical science, an increase in the cost of medical care promptly followed. This was as logical as any step taken by mankind in any other development of human activities. When one improves his living conditions, one expects to pay more for the newer service. When one adds to the old time routine of taking history and making a diagnosis on the history alone, the modern routine of laboratory diag-

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nosis, X-ray pictures, cystoscopy, bronchoscopy, and other technical procedures, one must expect to pay more for the improved service. The rise in the quality of the practice of medicine has stimulated a vast amount of discussion of the cost of medical care. To this problem the medical profession is giving more attention than is being given by any other part of the population and the solution of the problem will probably come from the medical profession. It will necessitate savings where they can be made without lowering the quality of the service. The profession will probably resist to the last ditch, any attempt to lower the cost of medical care by lowering the quality of the service or by lowering the standards of the profession.

"Mr. Harding sees the only answer to the problem in complete control of medicine by the state. If such control had been demonstrated in numerous other countries, which have now been experimenting with state control for some ten to twenty years, to be an adequate solution of the problem, the medical profession of this country would probably consent to a similar scheme. Actually, no other country has demonstrated the practicability of supplying high class medical service under government control. The American medical profession is convinced that such service is not suitable to American conditions. Once established, Americans would not tolerate it any more than they tolerate prohibition. The state full-time salaried doctors would attend to the T. Swann Hardings and the intelligent, free-minded and unbabbitized would seek out bootleg physicians."

Interesting Medical History.

To the Editor:

Believing that many members may not see the following article from the *Confederate Veteran* (February issue), and feeling personally that it will be a most interesting and informative contribution for our future medical history records, I am herewith enclosing it for publication.

J. Allison Hodges.

Richmond, Va.
February 9, 1931.

The South's Contribution to Medical Science.

By MRS. WILLIAM CABELL FLOURNOY.

[Awarded the Thomas Cathey White Prize at Asheville Convention of the United Daughters of the Confederacy, November, 1930.]

As late as 1848, Sidney Smith asked, "Who reads an American book?" The ink was scarcely dry upon his cynical pen when the use of anaesthesia was discovered by a struggling young physician in Georgia.

The renowned Velpeau, of Paris, had declared that an attempt to prevent pain in surgical operations was nothing less than chimerical. Yet it was only three years after this statement was made that Doctor Crawford Long, of Georgia, then twenty-seven years old, the resection of the superior maxilla. He was a prodigy in his own age, and a prophet of the performed the first painless surgical operation known to history.

Long before this great event, however, we find the names of gifted Southern men shining as benefactors of the human race; for, though our first century may have been poor in books, it abounded in strong, conscientious, brave men, who, with limited resources, accomplished far-reaching results.

Doctor Phillips, of England, places in his table of statistics the name of Ephraim McDowell, of Virginia and Kentucky, at the head of operators. The *London Medical Review* said: "A back settlement in America—Kentucky—has beaten the Mother Country, nay, even Europe," in recognition of McDowell's skill and courage when, in 1809, he performed, unaided, the first operation ever undertaken for the removal of an ovarian tumor. Forty years after his death, Europe awakened to the fact that McDowell was justly entitled to be called the "Father of ovariotomy," and erected a monument to his memory, as having "contributed more to the alleviation of suffering and the prolonging of human life than any member of the profession in the nineteenth century." Doctors McDowell and Marion Sims, of South Carolina (then in the obscurity of Northern Alabama), laid the foundations of practical gynecology, and brought fame to American medical science in foreign lands.

Doctor Marion Sims, in 1849, while practicing in a small town in Alabama, operated successfully in a case of vesico-vaginal fistula. His skill was later recognized and his methods followed by the profession in New York City, where he established The Woman's Hospital for the free treatment of suffering women. While in Paris, the most celebrated surgeons of France gathered together again and again to see him operate for vesico-vaginal fistula. They gave a dinner in his honor, and he was elected corresponding fellow of the Royal Academy of Medicine, and recommended to the Government for the Legion of Honor.

A few years earlier, Dr. Peter Mettauer, of Virginia, had first conceived the idea of curing fistula, and he was the first on this continent to operate for cleft palate, first to employ iodine in the treatment of scrofula, and among the first in such major operations as amputation of the shoulder, ligation of the carotid, and time to come. He operated eight hundred times for cataract, and even Dudley's record in

"cutting for stone" two hundred and twenty-five times yields to Mettauer's four hundred operations for this trouble. In 1837, he organized a Medical Institute, and was a daring inventor of surgical instruments, making many of them at a local shop with his own hands.

Dudley, of Kentucky, performed the first operation for stone in the bladder, and was called "The great lithotomist." He was also an advanced apostle of asepsis, attributing much of his success to the use of hot water; he strongly opposed bleeding, which was the universal custom at that time.

The writings of Fearne and Erskine, in Alabama, were the first to throw light upon the proper method of treating malaria and malarial fevers. Until their day, the doctors were bleeding and purging until the fever disappeared, and then giving a grain or two of quinine three times a day. But these men advised giving it without regard to preliminary treatment, always in the very beginning, and in sufficient doses to affect the system at once.

In the latter half of the eighteenth century, inoculation for the prevention of small-pox was extensively resorted to, having been introduced into Charleston, S. C., in 1738. Hospitals for this purpose were opened in the different colonies, the first one at Williamsburg, Va., in charge of Doctor James McClurg.* His son, Doctor Walter McClurg, studied medicine at the University of Edinburgh, and attended hospitals in London and Paris. In 1779, he filled the chair of medicine established that year at William and Mary, which was next in time to that of Philadelphia. He was a member of the Federal Convention in 1787, and died in Richmond in 1825, having occupied for fifty years perhaps the foremost place in his profession in America. His essay on "The Human Bile" was translated into every language in Europe.

The earliest known quarantine act was that passed by the General Assembly of Virginia, in 1722, for keeping yellow fever out of the province. In Virginia was established the first institution exclusively for the insane, as well as provision for the care of the colored insane. This marks the beginning of rational treatment of the insane in this country.

*Editor's Note:—These names have possibly been confused, as Dr. Walter McClurg was the father of Dr. James McClurg, prominent physician of Williamsburg and Richmond during the Revolutionary period.

Foremost among the triumphs of bacteriology stands the discovery, by Doctor Walter Reed, of Virginia, that the yellow fever germ is conveyed by the mosquito. Thus, it is due to his research work after the Spanish-American War, that the Atlantic seaboard was relieved from this scourage after three centuries of suffering.

Doctor William Bull, of South Carolina, who took his degree in medicine at Leyden, in 1734, was the first native American to graduate in medicine. Ten South Carolinians graduated from Edinburgh between 1768 and 1778, and there were eminent medical men in both Carolinas prior to the Revolution; for many years they led all the colonies in the study of the natural sciences. Doctor Lionel Chalmers, of South Carolina, wrote a treatise on the "Weather and Diseases of Charleston," which is still an authority; while Doctor John Lining's "A Description of Yellow Fever" stands unrivalled for accuracy. To South Carolina's credit are such illustrious pre-Revolutionary Doctors as James Moultrie, Alexander Barron, and David Ramsey. North Carolina gave to the profession, in those early days, Doctor Ephraim Brevard, author of the Mecklenburg Declaration of Independence, Nathaniel Alexander, and Hugh Williamson. In 1790, Doctor A. J. De Rossett, of North Carolina, wrote ably on "Pestilential Fevers."

Louisiana, early in the nineteenth century, produced remarkably able men in the field of medicine. Doctors Penniston, Fenner, Chaillé, and Stone were noted experts in yellow fever, and Doctor Joseph Holt in quarantine and disinfection. Some of the most valuable and indispensable inventions applicable to surgery came from Doctor Greenville, of Texas.

Doctor Paul Eve, in early life a volunteer surgeon in the Polish Rebellion, became a noted surgeon and teacher in Georgia, and is believed to be the first American to have done an hysterectomy. He was professor in several medical schools, and wrote more than six hundred articles on professional subjects.

The first amputation of the hip joint done in the United States was by Doctor Brashear, of Kentucky, early in the nineteenth century.

It is stated on good authority that, prior to 1749, only Doctor Physick, of Philadelphia, had done anything for the improvement of the profession. About this time, however, Vir-

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ginia produced a brilliant surgeon in William Baynham. His operation for extra-uterine pregnancy, alone, gives him enduring fame. Next to him came Doctor Mettauer, already mentioned, who deserves to rank among the first surgeons of this country, while, as a matter of fact, surgical history gives him mere mention. All of these physicians and surgeons were fonder of the scalpel than of the pen, and they often failed to record their marvelous work performed in a wilderness. They had none of the advertising spirit of today, and seemed intent only upon relieving human suffering. Therefore, in many instances, others who followed them claimed priority in many of these surgical feats.

Most of the medical men referred to were also actively engaged in teaching and training young men for the profession. William and Mary's Medical School, founded in 1779, followed that of Pennsylvania, which was the first in America. Twenty years later, Doctor Samuel Brown organized the Medical Department of Transylvania University in Kentucky, which was reorganized in 1819 by Doctor Benjamin Dudley. Both Dudley and McDowell lectured for years in this school of medicine, which was later removed to Louisville and incorporated in the University of Louisville.

Baltimore began instruction in medicine in 1800, and since that time the schools of Maryland have occupied a deservedly high position. An endowment by one of her citizens made possible Johns Hopkins University, foremost in scientific research, as well as a completely endowed hospital by the same name. Doctor Harris, of Baltimore, founded the Baltimore College of Dental Surgery in 1845, which was not only the first in America, but in the world.

In South Carolina, medical instruction was first organized in 1823; in Louisiana, in 1835. Both of these States have maintained schools of high character.

The Medical Institute founded and presided over by Doctor Mettauer in Virginia, in 1839, became later a part of Randolph-Macon College. After the Revolution, Hampden-Sidney College developed a medical department located in Richmond. Some time later, the State of Virginia took this over, and it became the Medical College of Virginia, and was the first to draw young Southern students away from the Northern medical schools. In the course of time, the Medical Department of the University of Virginia also took high rank, which it still holds.

Devotion to duty was never better illustrated than during the terrible epidemic of Yellow Fever in Norfolk and Portsmouth, Va., in 1855, which lasted over three months and depopulated two cities. It is estimated that one in three of the white population perished, and no less than forty-five physicians lost their lives.

And what shall we say of the Medical Corps in the Confederate Army, those brave men who wore their wounds like stars? Doctor Hunter Holmes McGuire, who was on Stonewall Jackson's staff, says: "Before the war ended, some of the best military surgeons in the world were to be found in the Confederate Army. His scant supply of medicines and hospital stores made him fertile in expedients of every kind. He searched field and forest for plants of medicinal value. The pliant bark of a tree made him a tourniquet; the juice of a green persimmon, styptic; a knitting needle, with point bent, a tenaculum. Breaking off one prong of a table fork, and bending the other prong, he would elevate the bone in a depressed fracture of the skull, and save life. Many valuable contributions to military surgery were made by Confederate surgeons."

Nor should we forget Doctor Samuel Demiss, of the University of Louisville, who, after serving through the War of the sixties, moved to New Orleans, where his skill became a cup of healing in the Yellow Fever epidemic of 1878. President Hayes appointed Doctor Bemiss chairman of the committee to investigate the origin of the fever. His report really resulted in the founding of a National Board of Health one year later. He was also a voluminous writer on professional subjects.

One is disposed to marvel that the members of the Southern School of Medicine have done so much with the means at their command, and history should grant them an honorable place among the great agencies to which the real advancement of America is due.

NOTE.—As one of the judges in this contest, Dr. Robert Wilson, Dean of the South Carolina Medical College, noted on the margin of this paper that the first quarantine act was passed by Massachusetts in 1648; and the second by South Carolina in 1698.

President's Message

The Business of Medicine vs. The Art of Medicine.

[By gracious request of the Editor of this Journal, a part of the discussion intended for this page this month, and supplementary to this article, will be found under the Editorial section in this issue.]

It is believed that it will be a conceded fact that the professional practice of Medicine has in recent years changed as much as the economic conditions under which physicians have done their work.

In addition, there has been developed, owing to the revelations of medical research, and the discovery of new and most remarkable methods of cure by physicians, an awakened public health-consciousness that sometimes ignorantly, but generally honestly, is demanding from the profession the speedy proof and acceptance of many of these alleged life-giving discoveries. As a result, health foundations, private philanthropic efforts, etc., have been initiated, hoping that with the speed characteristic of this age, greater efficiency might be developed, and earlier results secured. Naturally, confusion has arisen, and often the physician, the author of these innovations, has been side-tracked or completely overwhelmed in the onward rush for quick and practical results.

Frequently, the physician has been too slow, and on the other hand, the public has been too hasty; there has been evident waste of opportunity by the one, and consequent destructive effort by the other.

The time has now come when these facts must be recognized, and the County Medical Society, the basic unit of medical organization for both professional and civic betterment, must meet these changing standards, and prove to the public that under such conditions, medical statesmenship for the common good means medical leadership in both the humanitarian and economic life of the people.

Formerly, there was only one kind of medical service, private practice; today, there are two kinds, private and public. The one was individual, the other is state-wide; the one was a bit selfish, the other is generously sympathetic.

In this day, physicians can no longer live for themselves nor unto themselves, for their obligations personally have increased professionally with the growth and advancing knowledge of their clientele.

With this increase of business and professional activity, a communal life has developed, and there have come new duties, not only civic but professional, and logically, our medical duties are now not only personal, but largely social in administrative function, and consequently, in this era of change and development, our efforts have been enlarged in scope and possible efficiency, and the County Medical Society must adjust its policies accordingly.

Never were the unsolved problems that confront the profession, both those of scientific research and of organized medicine, so varied, so vital and so profound as they are at this time, and their solution requires a new courage and a rare idealism which must summon to their aid the alliance of all helpful health organizations in the State.

Our state, and above all, our profession demands from each citizen and each member not only a negative acceptance of membership, but a positive allegiance, and sentimentality must not be mistaken for service.

The humanitarian demands of enlightened public opinion must likewise be considered and, when supported by common sense, must be met by the profession and coalesced with other health movements, or guided by medical leadership into safe channels. We must not be uselessly obstructive, nor wholly repressive. The public has certain well-established rights and privileges, and we must admit such and endeavor to lead or frustrate them openly, as occasion may dictate. We must admit that our professional standards sometimes are not adjusted to economic needs, and when this self-appraisal proves the fact, we must not be slow to accept this viewpoint, and in return, should hasten to do that which justly conforms to our ideals as a health-service profession, anxious to champion and advance scientific medicine and worthy communal causes.

The individualism of medical practice is passing, and the County Society must adjust itself to this new era of thought. The Business of Medicine must be predicated and practiced upon the same high grounds of achievement as the Art of Medicine, and if organized medicine cannot fulfill these requirements, some other agency, even Federal or State, can, and will.

In this effort, no war should be waged by curative medicine against preventive medical methods, for it is unnecessary and wasteful, and makes sour "the pure juice of the grape of human welfare."

All these medical problems, some profes-

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sional, and others more businesslike in character, must be solved by a medical statesmanship, born and developed in the County Medical Society and, when a new condition appears, it should first recognize and harmonize, and then cooperate and lead to a successful conclusion.

Medicine has assumed public characteristics in this latter day, and when this vision is established in the minds of official and non-official agencies striving for the same end, the local County unit through its Committees on Public Relations and Public Health Education can solve these irritating and complex problems of economic development, and a liberalized profession will have increased work to do in this new and inviting field of modern medicine, supported by other broad alliances with high aspirations for service.

J. Allison Hodges, M. D., *President,*
Medical Society of Virginia.

Proceedings of Societies

The Elizabeth City County Medical Society

Recently elected the following officers for the year 1931: President, Dr. J. W. Hope, Hampton; vice-president, Dr. P. J. Parker, Hampton, and secretary, Dr. G. K. Vanderslice, Phoebus. Drs. Eldred S. Jones and Willard Smith, both of Hampton, have been elected to membership.

The Society met at the office of Dr. Vanderslice on February 2nd, and was well attended. Two surgeons from the U. S. Army at Fort Monroe, one from Langley Field, and two from National Soldiers' Home were present and entered into the active work of this Society.

"Syphilis" was the subject for the evening, a paper being read by Dr. W. H. Howard, Hampton, dwelling especially with its Pathology, Diagnosis and Treatment. In discussing the paper, the remarkable apparent lessening of the disease in the U. S. Army was commented on as well as the notable increase in its prevalence in civil life—or possibly the increased diagnostic acuteness makes it appear so—though the marked increase in all venereal diseases seemed to some of those discussing the subject to be observable on even superficial study.

On February 17th, the Society met with Colonel Duval, Surgeon in charge, Fort Monroe, Va., and at that time Major Howell M. Estes, U. S. Cavalry, instructor in the Coast Artillery School at Fort Monroe, showed a moving picture demonstrating the operation of the Medical Regiment with an Infantry Division during an attack. This was followed by three films of the "Battle of the Somme" and of Italian Equitation at the Assembly Room of the Coast Artillery School.

The Rockbridge County Medical Society

Held its quarterly meeting at the Jackson Memorial Hospital, Lexington, Va., January the 21st. The following doctors were present: Drs. H. R. Coleman, Jr., R. P. Cooke, C. H. Davidson, F. M. Leech, H. L. Mitchell, and E. P. Tompkins, of Lexington; Drs. Charles S. Groseclose, J. H. Mapp, and F. L. Thurman, of Buena Vista; and Dr. J. H. Green, of Brownsburg. There new members were elected, namely, Drs. Coleman, Green, and Groseclose.

Dr. Francis Lee Thurman gave a report of the recent meeting of the Southern Medical Association which was held at Louisville, Ky., and the unveiling of the monument to Dr. Ephraim McDowell. Dr. McDowell, who was born in Rockbridge County, Va., and later emigrated to Kentucky, was the first physician in the world to perform an abdominal operation. This was done in the year 1809, the patient being Mrs. Jane Todd Crawford, who was also born in Rockbridge County. Mrs. Crawford rode sixty miles on horseback to his office and in twenty-five days rode home again. No anesthetic nor antiseptic was used, and it is said that Mrs. Crawford repeated Psalms during the operation. Dr. Thurman stated that an effort is being made to erect a monument to Mrs. Crawford also.

The following officers were elected for the coming year: President, Dr. Francis Lee Thurman, Buena Vista; vice-presidents, Dr. J. H. Green, Brownsburg, and Dr. C. H. Davidson, Lexington; and secretary-treasurer, Dr. H. L. Mitchell, Lexington (re-elected).

The James City County Medical Society Revived.

At the suggestion of Dr. A. M. Sneed, of Toano, there was held a meeting in his office, January 29th, for the purpose of reviving the old James City County Medical Society. The following officers were elected: President, Dr. A. M. Sneed, Toano; vice-president, Dr. J. R. Parker, Providence Forge; secretary-treasurer,

Dr. J. R. Tucker, Williamsburg. Others present were Drs. J. M. Henderson, E. B. Kilby, W. L. L. Smoot, and D. J. King.

Among the matters discussed was the changing of the name of the Society to James City-New Kent Medical Society; the inclusion in the membership of the dentists of these two counties; standard fees for the administering of vaccines, etc. The society is to meet the first Thursday quarterly. The next meeting will be held at Providence Forge, on April 2nd.

After the meeting, the members adjourned to the home of Dr. Sneed where Mrs. Sneed served a most delightful supper.

The Loudoun County Medical Society

Held its regular monthly meeting at the home of Dr. Geo. H. Musgrave, Leesburg, Va., on Wednesday, February 11th. The society discussed, at some length, the Board of Supervisors' notice of their resolution, published in the *Loudoun Times-Mirror*, which substantially is: Indigent persons, sent by the Board of County Supervisors to the Loudoun County Hospital, will be treated at the expense of the county by such resident physician as may be designated by the hospital, instead of the physician residing near the home of the indigent. It was decided to bring the matter up at the next meeting, as it was introduced late in the evening and, on account of its serious nature, required much thought.

A letter to Dr. W. H. Ross, president of the New York Medical Society, was read, thanking him for his communication relative to the work of the Public Relations Committee for his state.

Dr. G. F. Simpson, Purcellville, is president, and Dr. W. O. Bailey, Leesburg, secretary of this society.

The Mid-Tidewater Medical Society

Met at West Point, Va., on January 27th, with an attendance of about 75 per cent of its membership. The following officers for 1931, who were elected at the October meeting, were duly inducted into office: Dr. William Gwathmey, Ruark, president; Dr. R. D. Bates, Newton, vice-president and president-elect; Dr. M. H. Harris, West Point, secretary; and Dr. Jas. D. Clements, Ordinary, treasurer. After a brief business session, the society enjoyed an hour of clinical case reports.

The society was entertained at lunch by the local physicians.

At the afternoon session, papers were read by Dr. M. P. Rucker on Treatment of Placenta Previa, and Dr. Greer Baughman on Prenatal Care. Both papers were discussed and thoroughly enjoyed by everybody. Other visitors attending were Drs. F. S. Johns, J. A. Sheild, and D. D. Talley, also of Richmond.

The next meeting will be held at Saluda, Va., on the fourth Tuesday in July, 1931.

The Arlington County Medical Society,

At its regular January meeting, elected the following officers for the ensuing year: President, Dr. John H. Gilligan, Clarendon; vice-president, Dr. Blanche Tabor, Cherrydale; secretary-treasurer, Dr. B. H. Swain, Ballston (re-elected).

Dr. J. Ogle Warfield, of Washington, D. C., read an interesting paper on "The Acute Abdomen." It was an excellent symposium on these troubles and brought out many points of decided educational value. The discussion showed quite a variety of opinions as to the conditions met with in the abdomen and the causes and methods of determination and treatment were freely discussed.

Warwick County Medical Society.

At the meeting of this Society on January 26th, Dr. Walter B. Martin, Norfolk, was an invited guest and read an interesting paper on "The Value of Iron in Secondary Anemia." This paper was discussed by Drs. E. L. Alexander, W. O. Poindexter, and J. E. Marable.

This is an active society with meetings on every second and fourth Monday of each month. The 1931 officers of the Society are Dr. L. E. Stubbs, president; Dr. W. O. Poindexter, vice-president; and Dr. Edward L. Alexander, secretary-treasurer. All officers are of Newport News.

New Education Bill in Great Britain.

The President of the Board of Education of Great Britain recently stated in Parliament that if the contemplated raising of the school-leaving age from fourteen to fifteen years became fully effective, approximately 400,000 children would receive an additional year's training in the schools of England and Wales. Of these, about 80,000 would be in rural and 320,000 in urban districts.

XUM

Department of Clinical Education

OF THE MEDICAL SOCIETY OF VIRGINIA

Continued Clinical Education.

The subject of post-graduate medical education has in recent years been receiving a well-deserved amount of constructive thought, as a result of which serious effort is being made in Virginia as well as in many other states to bring within reach of the general practitioner of medicine opportunity for keeping informed as to the advances constantly being made in medicine.

This indicates first, that there is a generally recognized need, more or less conscious in nature, among the rank and file of the profession; and second, that there is recognition on the part of our Medical Colleges of a definite responsibility for extending aid along these lines to the graduate in medicine after he has received his diploma; third, that there is today an exacting and stimulating demand on the part of the lay public for scientific, modern methods in diagnosis and treatment brought about to a large extent by the modern public health movement. The microscope, the X-ray and other instruments of accuracy and revealed truth, have helped to bring about this new attitude on the part of the public. The doctor is finding today more than ever before that the emphasis is being shifted. This shifting of emphasis and the necessary readjustment resulting has led to much confusion. This fact along with the demand for increased hospital facilities has led to many economic problems, alike perplexing to the doctor and to the patient. The development of public clinics and of group practice, brought about in part at least by the mounting cost of medical treatment, have presented problems of national interest. The need, therefore, for a practical plan of continuing medical education has been intensified during this period of readjustment.

Organized medicine in Virginia, as represented by the State Medical Society, by the two Medical Colleges and by the State Board of Health, owes it to the individual doctor and to the people of the State not only to hold high the torch of medical knowledge but also to see that all the practical help possible is brought within reach of the man remote from hospitals who must work out his daily problems alone. Granted then that post-graduate clinics are needed as an aid to the average man in his effort to keep abreast of the times, it is manifestly the duty of these organized medical agencies of Virginia, operating through the Department of Clinical Education, to conduct them. Question as to what kind of clinics to hold and how to hold them naturally arises.

That such a representative group of doctors as compose this committee on post-graduate education is setting itself to work out this problem is a most encouraging sign of the times. I understand that a good beginning has already been made and that a plan is being worked out whereby at least one clinic is to be held in each of the ten councilor districts during the current year. While there naturally will be diversity of opinion as to details of subject, time and place, there can in my opinion be little question as to the value of this effort. In my opinion these clinics should be made to deal primarily with those questions which most frequently confront the general practitioner and should be dealt with in rather intensive fashion with cases selected and demonstrations conducted in such a way as to clearly present the most modern thought on a given subject. For example, every general practitioner is called upon to deal frequently with problems of infant feeding. A clinic on this subject, therefore, might be made to develop most interesting and helpful teaching material.

R. W. Garnett, M. D.,
Health Officer, Danville, Va.

We are very much pleased to have on this page a short article by Dr. R. W. Garnett, Health Officer of the City of Danville. Dr. Garnett was formerly Assistant State Health Commissioner of Virginia and is considered one of the most active and progressive health officials in the State. His views and suggestions should be helpful to us. I take pleasure in giving this article my hearty endorsement.

Scheduled Meetings

The Chairman of this Department is much gratified and encouraged at the response to the letter sent out to the Councilors in January.

Dates have been fixed and programs are being arranged for a number of clinical meetings to be held within the next two months in the following cities and towns: Petersburg, Lynchburg, Norfolk, Lebanon, Wytheville, Waverly, Hopewell, Martinsville, Newport News, Roanoke, Richmond, and University.

NORFOLK COUNTY MEDICAL SOCIETY

The following programs will be presented during the month of March, 1931:

Monday, 9th March: SECTION ON SURGERY
Mesenteric Thrombosis, Dr. Robert Duval Jones.
Cardiolysis for Adhesive Pericarditis, with motion pictures, Dr. Hugh H. Trout, Roanoke, Va.
Discussion of Adhesive Pericarditis, with report of a case, Dr. R. L. Payne.

Monday, 16th March: SECTION ON MEDICINE
Syphilis as an Economic Problem, Dr. D. Lee Hirschler.
Serum Diagnosis of Syphilis, Dr. Mary E. Roche.
X-Ray in the Diagnosis of Chest Disease, Dr. Chas. R. Grandy.

Monday, 23rd March: SECTION ON PEDIATRICS
Subject to be announced later.

Monday, 30th March: SECTION ON EYE, EAR, NOSE AND THROAT
Accessory Sinus Disease as a Factor in Focal Infection, Dr. Herbert R. Etheridge.

The All Day Clinic conducted last Spring by the Norfolk County Medical Society, at the suggestion of the Department of Clinical Education of the Medical Society of Virginia, was such a success that it was decided to make it an annual affair. The date has been tentatively set for the middle of April, but will announced definitely in the April issue of the MONTHLY.

A cordial invitation is extended to all members of the Medical Society of Virginia to be in Norfolk for this occasion and doctors from other states are also invited to attend this All Day Clinic.

The *Lynchburg and Campbell County Medical Society* is arranging for an afternoon and evening clinical meeting on April 23rd, in cooperation with the Department of Clinical Education. The clinics will start at 2 P. M. and there will be six thirty-minute clinics with demonstrations of patients and conditions. There will be a supper at 6:30 P. M., and this will be followed by four fifteen-minute papers. The meeting will be over by 8:30 P. M.

All of the clinics will be held in one place, the location of which will be announced later. Invitation is extended all members of the Medical Society of Virginia to attend.

Information about this clinic may be obtained from Dr. D. P. Peters or Dr. Ernest G. Scott, president and secretary, respectively, of the society, or Dr. J. R. Gorman, Councilor, all of Lynchburg.

The *Southside Virginia Medical Association* will hold its regular quarterly meeting conjointly with the Department of Clinical Education of the Medical Society of Virginia at the Central State Hospital, Petersburg, Va., on March 10th.

The feature of this meeting will be an address on "Psychological Medicine" by Dr. William A. White, of Washington, D. C., distinguished psychiatrist and superintendent of St. Elizabeth's Hospital of that city. This will be an unusual privilege for doctors in this section, as Dr. White has not previously appeared before a district society in Virginia.

Dr. Ruth Mason, Petersburg, is president, and Dr. Philip Jacobson, also of Petersburg, secretary of the Association.

Information

All members of the Medical Society of Virginia are requested to write for any information desired on any subject relative to these Extension Courses in Graduate Medical Education, either to the Executive Secretary, Mr. George W. Eutsler, P. O. Box 707, University, Va., or to the Chairman of the Department of Clinical Education, Danville, Va.

I. C. HARRISON, *Chairman.*

Analyses, Selections, Etc.

Graduate Education in Virginia.

Dr. Frank Overton, Executive Editor, has the following to say in the February 15th issue of the *New York State Journal of Medicine:*

The House of Delegates of the Medical Society of Virginia on September 22, 1929, approved and adopted a report of the Committee on Medical Education and Hospitals, outlining a plan for bringing graduate medical education within reach of the physicians of the State through the cooperation of the State Medical Society, the two medical schools of the State, and the State Department of Health. The plans were reported in several issues of the VIRGINIA MEDICAL MONTHLY, abstracts from which were published in four issues of the *New York State Journal of Medicine* as follows:

December 15, 1929, page 1,550.

February 1, 1930, page 188.
February 15, 1930, page 248.
April 15, 1930, page 486.

We have just received a booklet of sixty-eight pages entitled "Post-Graduate Medical Education in Virginia," published by the University of Virginia, Charlottesville, Va. The booklet is a review of graduate work not only in Virginia, but also in other States. The Virginia booklet, Part 1, opens with the sentences:

"Various plans in thirteen American states, Colorado, Iowa, Michigan, Minnesota, Missouri, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, West Virginia, and Wisconsin, are known to have been inaugurated, with different degrees of success, as state programs of graduate medical education. Such data as could be found for each state have been summarized."

In addition to these thirteen states, the *New York State Journal of Medicine* of 1929 and 1930, has abstracted descriptive references to Graduate work from the Journals of seven additional states: Georgia, Indiana, Kentucky, New Jersey, South Carolina, Texas, and Washington. The *New York State Journal* also quoted Kansas and Nebraska as seriously considering the establishment of graduate courses.

The Virginia booklet devotes three pages to the New York State Society courses, and says:

"New York has the largest undertaking, conducted by the strongest State Society, on the most generous plan." Its description of the methods in other states is a mine of information.

The VIRGINIA MEDICAL MONTHLY for January says editorially:

"Throughout the past year Dr. Hodges as Chairman of this Department has had an article on this page in each issue of the MEDICAL MONTHLY, discussing the work of the Department (of Clinical Education), setting forth his plans for post-graduate medical education and appealing for cooperation to the Councilors of the State Society and to the leaders in the various Component Societies.

"It will be our policy to carry out the same plan with some changes which will, I think, add to the general interest of these articles. I shall at various times during the year ask other members of the Department of Clinical Education to contribute short papers giving their views on various phases of the work, and feel sure that this will add materially to the effectiveness of our whole undertaking. We may also from time to time ask specialists to discuss the importance of holding clinics in certain specified diseases. In some cases these may be teachers connected with one of our Medical Schools and in others general practitioners or specialists in private practice. I feel that this departure will meet with the approval of the membership of the State Society."

The January MONTHLY also had the following news note:

"A post-graduate clinic for Negro physicians of Virginia is announced by Dr. W. T. Sanger, president of the Medical College of Virginia. This is stated to be the first educational venture of its kind in the South and will be established by the College in connection with the Saint Philip Hospital, Richmond. The instruction will begin June 16th. The Negro physicians have been asked to decide upon the courses. It is stated that the College has had the plan under consideration for several years and it has the indorsement of the Department of Clinical Education of the Medical Society of Virginia."

Woman's Auxiliary, to the Medical Society of Va.

New Opportunities.

It is believed that the members of the Auxiliary really desire opportunities to aid the State Medical Society, and thus advance health measures for the people at large.

Consequently, your President is now suggesting two opportunities for service, one of them has been only recently undertaken by the State Society through its educational agency (The Department of Clinical Education), and the other it is hoped soon will be. The one looks to the education of prospective mothers, and the other will be concerned with public health education generally.

The first of these is just being initiated, and will seek to educate mothers in maternal welfare by physicians holding Pre-natal and Post-natal clinics throughout the State, and it is urged that assistance in this work be made the *special duty of each Auxiliary for this year.* This, of course, will take time, but our members can be of the greatest assistance to

the local doctors in educating in advance women who are prospective mothers as to the simple directions and precautions necessary to protect the lives of themselves and their infants during the pre-natal and post-natal stages, and later, by aiding the clinics when they shall be held all over the State.

The appalling record for mortality in maternity cases is well known, especially in the United States, it being the highest in the civilized world, and it is our duty, as your President believes it will be your pleasure, to do your part in this humanitarian and necessary work.

The Medical Department of the University of Virginia and the Medical College of Virginia are going to help the doctors in this State-wide work, and our Auxiliaries can assist most materially.

To see what can and has been accomplished by very simple measures, see the recent February issue of the VIRGINIA MEDICAL MONTHLY, pages 758-9.

We can render a personal service by looking up the women in the rural sections. They are usually shy and difficult to approach, but by tact and a sympathetic understanding, we can put them in touch with medical assistance.

Please help in this great opportunity for service by at once interesting your local Auxiliary, and inform me, so that your cooperation can be reported in these columns.

The Auxiliary, as its name implies, is to aid in promoting the aims and objects of the Medical Society of Virginia, especially along the lines of health education and Public Welfare. It shall not take any action contrary to, or independent of the Medical Society of Virginia, and to that end, the Society has appointed an Advisory Board of three physicians, Drs. Southgate Leigh, of Norfolk, J. W. Preston, of Roanoke, and Lawrence Price, of Richmond, to whom we can go for advice and assistance.

The greatest need of our Auxiliary is to have a larger organization. There should be an organized group in each county to do effective work. This cannot be left solely to our Chairman of organizations—all must help.

We urge every doctor's wife to look carefully over her community, and get a group together no matter how small, and study their local health condition—no work is so important. We want our families and friends, not to be merely "up and around," but to be 100 per cent fit, for it takes perfect health to meet the many demands in this strenuous age. We must have correct, definite information before we can pass it on to others.

Keep informed by reading the Auxiliary reports in the different State Journals, and especially the interesting articles in the *American Medical Association Bulletin* written by that "live wire" little woman, Mrs. W. J. Freeman—would there were more of her kind.

Let's all pull together, and have a year of notable achievement.

AUXILIARY NOTES

The Woman's Auxiliary of The American Medical Association sends out at regular intervals a Study Program which you will find most interesting and helpful

These programs are prepared by Mrs. Evarts V. DePew and Mrs. George H. Hoxie, and approved by the Advisory Council of The American Medical Association.

Envelope No. 4 on "Communicable Disease Control" has just been issued, and contains much valuable information—especially in regard to protecting school children.

Anyone interested can secure this Envelope No. 4 by writing to Mrs. J. Newton Hunsberger, 514 West Main Street, Norristown, Pa.

Many programs on various subjects suitable for Auxiliaries have been developed in the past year, so any group can find a plan to suit its need.

The Auxiliaries are taking great interest in collecting and preserving the Medical history of their respective States.

Texas again carries off the palm of priority, as Mrs. S. C. Red, the first President of The National Auxiliary, is the first woman to write the Medical History of a State. Her book, "The Pioneer Doctor," is just off the press. The proceeds from this book will be devoted to Auxiliary work.

Three Southern States report histories of their Auxiliaries in preparation, and six are keeping scrapbooks.

Read in this number of the VIRGINIA MEDICAL MONTHLY, an excellent article "The South's Contribution to Medical Science," a prize essay, by a Virginia woman, Mrs. William Cabell Flournoy. While not a doctor's wife, she is connected with the profession by kinship with Virginia physicians.

XUM

Mrs. Flournoy has long been an active worker in the Civic, Patriotic, and Literary women's organizations of the State. She has been honored with many offices, and we are glad she has contributed this valuable paper on the history of the Medical profession in the South.

Any historic information, please send to me.

MARY GRAY HODGES, *President,*
Woman's Auxiliary,
Medical Society of Va.

The Truth About Medicine

In addition to the articles enumerated in our letter of December 27th, the following have been accepted:

Abbott Laboratories
Ampules Gold Sodium Thiosulphate—Abbott, 0.01 Gm.

Arlington Chemical Co.
Grass Mixture No. 1 Pollen Extract—Arlco (Timothy, June Grass, Orchard Grass, Red Top, in equal parts); Grass Mixture No. 2 Pollen Extract—Arlco (Timothy 40 per cent, Orchard Grass, Red Top, and Sweet Vernal Grass, each 15 per cent); Grass Mixture No. 3 Pollen Extract—Arlco (Bermuda Grass and Johnson Grass in equal parts); Ragweed Dwarf and Giant Mixture Pollen Extract—Arlco (equal parts of each); Birch Mixture Pollen Extract—Arlco (White Birch, Black Birch, Yellow Birch in equal parts); Maple Mixture Pollen Extract—Arlco (Red Maple, Ash-leaved Maple, Norway Maple, Sugar Maple in equal parts); Oak Mixture Pollen Extract—Arlco (White Oak, Red Oak, Black Oak, Swamp Oak in equal parts).

Fairchild Bros. & Foster
Liver Extract—Fairchild.

Eli Lilly & Co.
Tablets Amytal, ¾ grain.

H. A. Metz Laboratories
Sulpharsphenamine—Metz, 0.75 Gm. Ampules.
Sulpharsphenamine—Metz, 0.9 Gm. Ampules.
Sulpharsphenamine—Metz, 3 0 Gm. Ampules.

G. D. Searle & Co.
Procaine Borate—Searle
Ampules Procaine Borate and Epinephrin 1 c.c.

NEW AND NON-OFFICIAL REMEDIES

The following products have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in New and Non-official Remedies:

Diphtheria Toxoid.—This product (Jour. A. M. A., November 15, 1930, p. 1505), is also marketed in packages of ten immunization treatments containing two 1 c.c. vials of diluted diphtheria toxoid for the reaction test and twenty 1 c.c. vials of diphtheria toxoid for treatment; in packages of fifteen immunization treatments containing one 1 c.c. vial of diluted diphtheria toxoid for the reaction test and one 30 c.c. vial of diphtheria toxoid for treatment. Lederle Laboratories, Inc., Pearl River, N. Y.

Schick Test.—A diphtheria immunity test (New and Non-official Remedies, 1930, p. 380), marketed in packages of one capillary tube containing undiluted diphtheria toxin standardized, sufficient for ten tests, accompanied by sterile diluent; in packages of one capillary tube containing undiluted diphtheria toxin standardized, sufficient for fifty tests, accompanied by sterile diluent; in packages of two capillary tubes containing undiluted diphtheria toxin standardized, sufficient for one hundred tests, accompanied by sterile diluent. As a means of control the Schick test control is supplied. National Drug Co., Philadelphia.

Ephedrine Hydrochloride—Gane and Ingram.—A brand of ephedrine hydrochloride—N. N. R. (New and Non-official Remedies, 1930, p. 169). Gane and Ingram, Inc., New York.

Ephedrine Sulphate—Gane and Ingram—A brand of ephedrine sulphate—N. N. R. (New and Non-official Remedies, 1930, p. 170). Gane and Ingram, Inc., New York.

Tuberculin Old (Human).—Tuberculin—Koch (New and Non-official Remedies, 1930, p. 358), marketed in single 1 c.c. vial package; also in packages of one 4 c.c. vial. National Drug Co., Philadelphia. (Jour. A. M. A., January 3, 1931, p. 39).

Pollen Extracts—Cutter.—The following pollen extracts—Cutter (New and Non-official Remedies, 1930, p. 31), have been accepted: Oak Pollen Extract—Cutter; Western Ragweed Pollen Extract—Cutter; Western Water Hemp Pollen Extract—Cutter. Cutter Laboratory, Berkeley, Calif.

Winthrop Viosterol in Oil, 250 D.—A brand of viosterol in oil 250 D.—N. N. R. (New and Non-official Remedies, 1930, p. 410; Jour. A. M. A., October 4, 1930, p. 1021). Winthrop Chemical Co., Inc., New York. (Jour. A. M. A., January 24, 1931, p. 271).

Tetanus Gas Gangrene Antitoxin (Lederle), Refined and Concentrated.—An anaerobic antitoxin (New and Non-official Remedies, 1930, p. 343), prepared by immunizing horses with gradually increasing doses of the toxins of *B. tetani, B. perfringens,* and Vibrion septique. The toxins are individually prepared. The product is marketed in packages of one syringe containing one prophylactic dose, stated to represent tetanus antitoxin, 1,500 units, perfringens antitoxin 1,000 units and Vibrion septique antitoxin 10 units. Lederle Laboratories, Inc., Pearl River, N. Y.

Gas-Gangrene Antitoxin (Polyvalent), Refined and Concentrated Without Tetanus Antitoxin.—An anaerobic antitoxin (New and Non-official Remedies, 1930, p. 343), prepared by immunizing horses with subcutaneous injections of gradually increasing doses of the toxins of *B. perfringens,* Vibrion septique, *B. oedematiens, B. sordelli* and *B. histolyticus.* The toxins are individually prepared The product is marketed in vials containing one minimum therapeutic dose, stated to represent perfringens antitoxin 10,000 units, Vibrion septique antitoxin 100 units, *B. oedematiens* antitoxin 200 units, *B. sordelli* antitoxin 200 units, and *B. histolyticus* antitoxin 25 units. Lederle Laboratories, Inc., Pearl River, N. Y.

Tablets Amytal, ¾ grain.—Each tablet contains amytal (Jour. A. M. A., October 18, 1930, p. 1178), ¾ grain. Eli Lilly & Co., Indianapolis.

Ampules Gold Sodium Thiosulphate—Abbott, 0.01 Gm.—Each ampule contains gold sodium thiosulphate—Abbott (Jour. A. M. A., December 20, 1930, p. 1913), 0.01 Gm. Abbott Laboratories, North Chicago, Ill.

Sulpharsphenamine—Metz, 0.75 Gm. Ampules.—Each ampule contains sulpharsphenamine—Metz (New and Non-official Remedies, 1930, p. 72), 0.75 Gm. H. A. Metz Laboratories, Inc., New York.

Sulpharsphenamine—Metz, 0.9 Gm. Ampules.—Each ampule contains sulpharsphenamine—Metz (New and Non-official Remedies, 1930, p. 72), 0.9 Gm. H. A. Metz Laboratories, Inc., New York.

Sulpharsphenamine—Metz, 3.0 Gm. Ampules.—Each ampule contains sulpharsphenamine—Metz (New and Non-official Remedies, 1930, p. 72), 3.0 Gm. H. A. Metz Laboratories, Inc., New York. (Jour. A. M. A., January 31, 1931, p. 357).

PROPAGANDA FOR REFORM

Treatment of Cough After Bronchitis.—Children who cough should not be permitted to attend school. If the child has fever, it should be kept in bed. Warmth, as uniform as possible, is the prime requisite in the treatment of colds and acute coughs. The chief of all expectorants is water: without it most medicinal expectorants fail and, with an abundance of it, they may not be required. Nevertheless, they probably contribute, when wisely used, to a speedier evolution of the various stages of bronchitis and to a more rapid recovery. The salines, chief among them ammonium chloride and sodium citrate, head the list of agents that may reasonably be expected to be of use in "loosening up" a cough, provided they are given freely, frequently and with plenty of fluid. Iodide, the most powerful of the saline expectorants, should not be employed until the acute stage is well over. When the cough is "loose," aromatics may be of value such as terpin hydrate and creosote. A cough that hangs on is not so much an indication for medicine as a challenge to determine why it does. (Jour. A. M. A., January 3, 1931, p. 61).

Antitoxins Against Scarlet Fever.—No "one-shot" method of active immunization against scarlet fever has proved effective. The present status of the "ricinoleated antigens" is that they are of unestablished value. Their therapeutic action has not been proved. Scarlet fever ricinoleated antigen has been distributed by only one concern and that concern has recently discontinued the manufacture and distribution of ricinoleated antigen and is recalling it from the market. (Jour. A. M. A., January 24, 1931, p. 292).

Book Announcements

A Manual of Normal Physical Signs. By WYNDHAM B. BLANTON, B. A., M. A., M. D., Assistant Professor in Medicine, Medical College of Virginia. Second Edition. St. Louis. The C. V. Mosby Company. 1930. 12mo. of 246 pages. Illustrated. Cloth. Price, $3.00.

The purpose of the manual is to present briefly and concisely such data as will enable the beginner in physical diagnosis to familiarize himself with the normal appearance of directly and indirectly visible surfaces; to visualize the normal location, size, and relations of those structures which may become altered by disease; to elicit and to recognize the manifestations of normal parenchymatous function.

Brevity and simplicity are achieved by presenting the text in outline form, supplemented with numerous well chosen diagrams and photographs.

There is a wealth of useful information simply stated and easy to find in the chapters on sound, inspection, palpation, percussion, auscultation, constitutional signs, head, neck, breast, respiratory system, blood vessels, blood pressure, sphygmomanometry, and electrocardiography, esophagus and abdomen, back, extremities, lymphatic system, rectal, and vaginal examinations, youth and old age. The chapters on regional anatomy, heart, nervous system, and order of physical examination are especially good.

For the next edition it is suggested: that the preface explain more fully the purpose of and need for this well conceived work; that more detailed references be made to the diagrams; that a brief section on transillumination of paranasal sinuses be included; that the few references to manifestations of disease, as on page 45, be anticipated in the preface.

O. S.

Chinin in der Allgemeinpraxis Unter Berucksicktigung Pharmakologischer Befunde. VON DR. MED. FRITZ JOHANNESSOHN. Mannheim. Mit Drei Bildnissin. Bureau Tot Bevordering Van Het Kinine-Gerbruik Amersterdam-W, 1930. amphlet of 232 pages. Upon request, copies will be sent medical men free of charge.

Modern Methods of Treatment. By LOGAN CLENDENING, M. D., Professor of Clinical Medicine, Lecturer on Therapeutics, Medical Department of the University of Kansas; Attending Physician, Kansas City General Hospital; Physician to St. Luke's Hospital, Kansas City, Mo. With Chapters on Special Subjects by H. C. Andersson, M. D.; J. H. Cowherd, M. D.; H. P. Kuhn, M. D.; Carl O. Rickter, M. D.; F. C. Neff, M. D.; E. H. Skinner, M. D.; and E. R. DeWeese, M. D. Fourth Edition. St. Louis. The C. V. Mosby Company. 1931. Octavo of 818 pages. Illustrated. Cloth. Price, $10.00.

Cancer. Its Origin, Its Development and Its Self-Perpetuation. The Therapy of Operable and Inoperable Cancer in the Light of a Systemic Conception of Malignancy. A Research by WILY MEYER, M. D., Consulting Surgeon to the Lenox Hill and Post-Graduate Hospital, New York Infirmary for Women and Children, etc.; Emeritus Professor of Surgery, N. Y. Post-Graduate Medical School. Paul B. Hoeber, Inc. New York. 1931. Octavo of 427 pages. Cloth. Price, $7.50.

May Day—National Child Health Day in 1930. Published by the AMERICAN CHILD HEALTH ASSOCIATION, 450 Seventh Avenue, New York City. Paper. Pamphlet of 116 pages.

This report summarizes the work done in the interest of children in the various states, especially that at the time of the National Child Health Day, which is observed by a larger number of communities each year. This work is proving a help in the promotion of the official health program of the states.

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Virginia Medical Monthly

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Editorial

Some Urgent Professional Problems, and Their Solution.

The present status of the practice of Medicine is not entirely reassuring as to its future. Something is seriously awry. The changing standards of this transitional era may be contributory, but even these are not wholly explanatory.

In public, if not in professional estimation, there would seem to be a decadence in the former respect for the ideals of the profession. Surely, it is evident that practitioners of medicine are no longer a privileged class, and proves that the public should be informed of the aims and services of the profession. Notably, too, with a larger mechanical tendency in practice, there has come a more commercial aspect in professional affairs.

Thus, from one cause or another, our profession itself is not the same in its idealistic standards and conceptions, though it may be, and evidently is more efficient in its professional practice.

Much of the trouble may be with the profession itself, its standards and its membership, and if true, should be corrected.

It may, also, be a fact that the average practitioner has not availed himself of latter-day scientific methods and procedures, and thus is lagging in the onward march of professional progress, not realizing that a number of former ordinary infections and diseases no longer exist, and that he must now confine his scientific investigations more definitely to individuals, and must examine his patients more thoroughly than previously to determine existing pathological encroachments, for, pathology of some kind, or in some degree, is present in nearly every patient, if it can only be determined and localized. This means extra work and increased scientific interest for every physician, and should add much to his material and cultural advantage.

The scientific sphere of Medicine must thus definitely be concentrated in some respects, and yet enlarged in others, and the time has come also, when we must apply "as much science to the business of Medicine, as to the art of Medicine."

The thoughtful conclusion to the whole matter is that the County Medical Society is, and must be, the instrument of scientific precision with which to attack and solve many of these new problems of the profession.

NEW PROBLEMS:

Some of them are not new problems in Europe and Great Britain, but many of them are new to us.

One of the most notable of them, Sickness Insurance, has been brought to us by the World War and the changing economic conditions since that catastrophic struggle. Our soldiers in that War, also, have educated themselves and the American people, as never before, to realize what is best in medicine, and in the future they will never be satisfied with an inferior medical service. This, as formerly, does not mean simply and only technical and professional skill, but also the will and judgment on the part of the medical profession to recognize and adjust radical changes, both professional and economic, in medical practice.

This cannot be done individually, it must be done by uniting ourselves into a cohesive business group in each county and in each state. Such a concept for our profession does not belittle it—it merely amplifies our opportunities for service to our profession and patients as well. We must take notice of the danger signals that are now flying, for we have arrived at a time, in fact this very year, when thirty-three state legislatures in this country are meeting, and in nearly every one of which bills relating to sickness insurance and in some, insurance for unemployment, will be introduced, and we must accept the challenge.

We would not for an instant relax our efforts to make our profession scientifically more perfect in technic, art and learning, for this of itself is of increasing potential value even with

the laity, but just at present, it is firmly believed that "the medical profession is facing greater and more difficult problems in its public relations than it is experiencing in its clinical practice."

The public is declaring that there is a medical economic crisis in our country, and demanding relief from the profession, that it make radical changes in present medical practice. If we neither hear nor heed these rumblings of discontent, we may lay "the foundations of not only less business and organization, but also of less science in Medicine as well." Business organization for self-protection and scientific progress in professional practice, should, then, from this time on, be our combined goal.

THE REASONS AND THE REMEDY:

How can this be done? Primarily, by stimulating the County Medical Society to regard the business aspects of its work as being as important and as compelling as its scientific work.

This in a sense is revolutionary, but these times are revolutionary and such a step is not impossible, nor unethical, and is now made necessary, because

1. The public is charging us with inability, if not failure, to deal with modern economic conditions. It is holding us responsible for many of them, and especially the increasing cost of sickness, forgetting, in reality, that our profession was the first agency, either professional or public, to launch an investigation into the study of this economic condition. It forgets, likewise, that basically this has been the result in large degree of the extravagant demands of many would-be socially-minded climbers, who, as patients, have required unnecessary frills that might advance them socially even in hospital environments. As a result, there has come all of this complaint about increased cost of medical care, when in reality less than three per cent of the income of this country is spent because of illness;

2. As a supposed panacea, the rapid growth of sickness insurance threatens now, as never before, the future of the profession. All of these insurance plans, as practiced in Great Britain and Europe, aim to provide a method of distributing the economic burden of medical care over a large fraction of the population and, in general, the schemes are financed by a combination of contributions from the insured (the employees), the employers, and from compulsory savings and indirect taxation. Worst of all, however, is the fact that the provisions for medical care by means of sickness insurance, as well as drugs, hospital treatment, etc., are only a part of a much larger scheme of insurance in the future against incapacity, disability, unemployment, old age and other economic risks.

At present, twenty-five or more countries have compulsory sickness insurance—three including the entire population, and the remainder restricting it to wage earners, and thus, practically one-third of their population is furnished free medical care and services. In Great Britain, for example, $800,000,000 annually are expended, of which $280,000,000 are paid by beneficiaries and employers, while the balance (over five millions) is made up from taxes each year.

In this plan, doctors have no place nor authority, except as temporary employees, and receive in England, according to published statistics, an average of 400 pounds annually for the insured members of the family, and a capitation fee of nine shillings per year for an average panel of 1,000 persons composed of the families of the insured.

This method, subversive of all initiative in the physician and destructive of all scientific study and research in disease, is, however, in high favor in these countries, it would appear, with an overwhelming majority of the insurance physicians, whose annual income is probably increased, but who spend more time in conforming to government red tape than to the treatment and prevention of disease. Strange as it may seem, also, others have commended it, notably the President of the British Medical Association at the annual meeting held recently in Winnipeg, and the Secretary of the International Labor office of the League of Nations, while in this country, a bill has been introduced recently in Congress advocating unemployment insurance, a first cousin to sickness insurance, and the Governor of New York will recommend to the present legislature to "take up a practical and definite study of unemployment insurance." Furthermore, in this country, the same compulsory principle of insurance is being extended in increasing measure to different labor groups. In such industrial groups, there may be some slight justification, but the end results will be practically the

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same, special contract medical and surgical service having been the forerunner of all these schemes; and

3. Federal agencies and private foundations of philanthropy are encroaching, likewise, upon the field of medical practice.

It is needless to mention specifically the various Bureaus and Federal subsidies of the Government that for years, and especially since the World War, have increasingly and unremittingly invaded the field of the practice of medicine. Some of the public official acts have been open and blatant in regard to medical rights and privileges, while others have been indirect and insidious, but most of them have been definitely and almost continuously destructive of professional initiative and purpose. It is reported that entire divisions of public service, and sometimes the entire families of Federal employees, have been considered for some assistance under the aegis of Federal medical control, and larger hospital facilities are being provided constantly for the care of specially favored groups.

Also, private philanthropic and group social welfare workers are extending their free medical service to include many who are able to pay, without even consultation or direction of medical authorities, either individuals or societies. The special charity in vogue is exploited, but the doctor is flaunted, except that he is utilized for service and generally without remuneration. In one of our states, also, even the State Department of Welfare, directing several important medical institutions, is even more thoughtless (?), and contains not a single physician among its Directors.

It is said that eight thousand hospitals, most of them largely charitable institutions, now function in this country, and that nine million patients were treated last year in America in free clinics.

THE TREND:

The currents are running strong, we are drifting, and compulsory sickness insurance, for example, is but a short step from insurance against unemployment and other experiments in socialized medicine.

Business problems, such as the above, and many others can be solved by a business organization directed by business methods.

As individuals, we are powerless, for we are facing an organized public, such as great industrial organizations, labor unions, legislatures, heavily endowed institutions, and philanthropic lodges and organizations, and to gain notice and secure results, organized effort must meet organized opposition, if not obstruction, face to face on equal terms in a fair field.

THE COUNTY MEDICAL SOCIETY AS A SOLUTION:

To meet these economic forces, and solve these problems, the County Medical Society is our best hope, and it can assist

1. By educating its members to magnify its scientific work, and at the same time study the modern economic problems that affect Medicine;

2. Its Medical Economics Committee and Public Relations Committee—State and County—should bring these matters frequently before each County Medical Society for information and education;

3. Decisions on pending professional economic questions should be made by the Society as a unit, and these should be used as the dictum of the Society's judgment. This will serve to give uniformity and standardization to local medical opinion and expression, and will combat the prevalent idea that doctors never agree on anything, and don't know what they want;

4. These Committees should also investigate all agencies dispensing charity, and report the worthy ones to the County Society for its final judgment and assistance;

5. In legislative years, the county and distrist candidates should be interviewed before elections by the county or district members of the Public Relations Committee, and informed of local medical opinion on pending legislation affecting the profession and matters relating to public health and public policy, and their opinions, when secured, should be reported to the local Society;

6. The County Medical Society should effect a cooperative business and professional association with all free clinic and free hospital practice in its county, so as to judge if the charity work extended is out of proportion to the needs of the local community;

7. Public health, which is not state medicine, should receive careful consideration by the County Medical Society and, as the medical profession is rightfully the head of all health policies, it should exercise appropriate authority to coordinate all such efforts, and prevent friction between the preventive and curative methods employed, and

8. Our state and national medical organizations will be effective only as the county units are active and intelligent, and consequently, the County Medical Societies must accept their individual and collective responsibilities.

GENERAL RESULTS:

The results of the various plans of sickness insurance as administered in the different countries of Europe, even in France, which put in operation only last July its special scheme, although it was the first to formulate the idea in 1794, are to our mind unsatisfactory to the doctor, to the patient and to the future of Medicine.

In every country having adopted it, sickness insurance and its allied activities, state administered, appear to be mainly national "grab" games, with the patients unceasingly demanding more attention for trivial ailments at diminishing cost. The insurance doctors, in many instances, accede to these demands by simply ordering the refilling of prescriptions, serving often as many as thirty patients an hour, and thereby increasing their income, while the insurance companies in two countries are now seeking to control even the medical colleges, and the end is not yet in sight, and in the meanwhile, the public pap is being milked to the limit of national economic endurance and capability.

None of these European plans, as now practiced, will be acceptable to this country, but already America has been inoculated with the germ-principle of collective protection against sickness.

PRESENT OUTLOOK:

As for Virginia, with its lack of alien immigration, and its little towns where social processes are bound up with intimate personal contacts, and even in its cities which are not yet so large but that a little of the fresh air of the countryside can still circulate in their streets, and where there still is preserved, along with traditional love of freedom, a strong trace of reverence for all life at its best, this new phase of State or Social medicine is not acceptable, and neither has, nor ever will have any appeal, either economic or professional.

However, as to the medical encroachments of the Federal Government into the states, there is more and increasing danger. Already, social medicine in some paternalistic form is no longer a vain delusion, for it now exists and operates in every state in the union, if recent statistics are to be believed, for it is reported "that sixty-two per cent of the hospital beds in America today are under control of Federal, State and municipal authorities, and that seventy-one per cent of the people sick today in the United States are treated by the Federal, State, and municipal authorities," (January *Bulletin A. M. A.*). As sinister as this may seem, it is not yet "State Medicine," but it has the earmarks and the forbidding "appearance of evil," and portends something of what the future may hold for us, if we heed not the signs of the time. Surely, we will never have State Medicine in its present-day European vestments, but our younger profession to which we owe much, demands caution and preparedness of us, if it is to carry forward in the future our colors with high credit to us and themselves.

To meet these tendencies, and solve these difficulties, more scientific education and better business organization by physicians and organized health-service professions are absolutely necessary. If this be done, then this new agent of industrial civilization will become the medical profession's servant, rather than its overlord.

This, indeed, is an era of transitional and developmental tendencies, and requires special thought and study. To adjust these innovations, our profession must be not wholly obstructive, but acutely critical in its judgments and practice, holding fast always to its traditional standards of honorable and humanitarian service.

In the future, the County Medical Society, the basic unit of organized medicine, must serve not only for the scientific advancement of the profession, but for its economic protection as well.

Who can gainsay the declaration that, if ever we have "State Medicine" in any form, it will be because of the scientific and business inefficiency of the doctors themselves?

"To be early warned, is to be doubly panoplied." J. A. H.

How Long Should Post-Graduate Medical Education Be?

The so-called post-graduate education of the doctors-in-the-field, after all is a system of keeping the mind in motion. As a distinguished teacher has said, of post-graduate edu-

cation, "it is the continued stimulation of the mature mind." Practitioners in the field, whether they are workers in the country districts, in small towns, in larger towns, or in cities, require and need to keep up the study of medicine throughout their career.

Keeping in touch with medical progress may be attained in a number of ways with more or less success. Practitioners may refresh their minds, may discover new facts, and may observe new processes of disease by periodically visiting a teaching center, or a leading hospital clinic where may be found a large daily program of work or a scheduled plan of clinical demonstration. Again, physicians at work in the field may regularly attend meetings of medical societies where may be heard the reading of papers by medical authors, who present papers of some interesting subject in medicine, surgery, and the specialties.

Physicians, again, who are active in daily work, and who each decade are getting farther away from the thousand-fold facts of the four-year-college-day of medical study, may find a method of keeping abreast of medical progress by the constant perusal and study of current medical publications. Journals, magazines, and textbooks afford such busy men means of acquiring a working knowledge of medical progress.

Besides, however, by the attendance upon medical centers, medical meetings, perusal and thoughtful reading of current medical literature, physicians, if they would make a life-long study of medicine, should keep a continued stimulation of the mind by a careful study of the cases that are passing through their hands. In this, the routine examinations of daily practice, one may find a rich field for advantageous post-graduate study. Intelligent and systematic inquiry into and an evaluation of the clinical material that comes to the hands of every practitioner of any degree makes for an education and brings about the finest performance of the medical practitioner.

News Notes

Dates Set for Roanoke Meeting.

The Council of the Medical Society of Virginia, at its meeting on February 17th, selected October 6th, 7th, and 8th for its sixty-second annual meeting in Roanoke. Headquarters will be at the Patrick Henry Hotel. The committee in charge of arrangements for this meeting has been selected as follows:

General Chairman—Dr. W. L. Powell
Treasurer—Dr. F. A. Farmer
Secretary—Dr. Fred E. Hamlin

SUB-CHAIRMEN

SCIENTIFIC EXHIBITS	Dr. W. P. Jackson
COMMERCIAL EXHIBITS	Dr. A. P. Jones
FINANCE	Dr. H. B. Stone
AUTOMOBILES	Dr. M. A. Johnson
GOLF	Dr. R. H. DuBose
ENTERTAINMENT	Dr. J. T. McKinney
HOTELS AND HALLS	Dr. H. H. Trout
TRAP SHOOT	Dr. L. G. Richards
RECEPTION	Dr. J. W. Preston
PUBLICITY	Dr. K. D. Graves
LADIES	Mrs. John O. Boyd

Anything relative to arrangements for the meeting may be addressed to the chairman in charge of that particular activity.

The Medical Examining Board of Virginia

Held its regular semi-annual meeting in Richmond, Va., December 9-12, 1930.

At this meeting, the following thirty-four applicants were granted licenses to practice medicine in Virginia:

Dr. Edward H. Adams, Portsmouth, Va.
Dr. George L. Adams, Bluefield, W. Va.
Dr. John Marion Baber, Washington, D. C.
Dr. Elijah Barber, Washington, D. C.
Dr. Samuel A. Bonnaffon, Wilmington, Del.
Dr. Edwin W. Burton, University, Va.
Dr. Francis B. Carter, University, Va.
Dr. Elizabeth C. Cole, Sanatorium, Va.
Dr. James L. Cornitcher, Danville, Va.
Dr. Ernest D. Davis, Jr., Hampton Roads, Va.
Dr. Andrew H. Dibble, Warrenton, Va.
Dr. Ernest C. Downing, Washington, D. C.
Dr. Richard C. Ellison, Washington, D. C.
Dr. Harry G. Grant, Richmond, Va.
Dr. Austin B. Green, Berkley, Va.
Dr. Howard K. Harrison, Bristol, Tenn.
Dr. Leonard I. Hoke, Quinwood, W. Va.
Dr. Joseph Horwitz, Philadelphia, Pa.
Dr. Walter S. Hunter, Wilmington, Del.
Dr. Julius Doar Johnson, Danville, Va.
Dr. Cleveland L. Jackson, Washington, D. C.
Dr. Abin L. Lindall, Quantico, Va.
Dr. Edgar A. Long, Jr., Washington, D. C.
Dr. Robert W. Mance, Jr., Columbia, S. C.
Dr. A. L. McLean, Richmond, Va.
Dr. Frederick Pilcher, Jr., Richmond, Va.
Dr. James Robert Porter, Washington, D. C.
Dr. Clayton A. Robbins, Washington, D. C.
Dr. John Terrell Scott, Lynchburg, Va.
Dr. M. Rockwell Thompson, Washington, D. C.
Dr. L. M. Thomas-Lyons, Bristol, Tenn.
Dr. Hugh Alfred Watson, Richmond, Va.
Dr. Charles Fremont West, Richmond, Va.
Dr. Ernest Y. Williams, Washington, D. C.

The Tri-State Medical Association of the Carolinas and Virginia

Held its thirty-third annual meeting in Richmond, Va., February the 16th and 17th, under the presidency of Dr. W. B. Lyles, of Spartanburg, S. C. The morning of the first

day was given over to clinics in the various hospitals of the city, the presentation of papers commencing in the afternoon. The invited guests, Drs. Louis Hamman, Baltimore, and John R. Caulk, St. Louis, delivered addresses and held clinics for the members of the Association. Thirty-nine applicants for fellowship were favorably passed upon by the executive council.

Raleigh, N. C., was selected as the 1932 place of meeting, and Dr. Beverley R. Tucker, Richmond, Va., was elected president. The vice-presidents are Drs. Joseph F. Geisinger, Richmond, for Virginia; Dr. Douglas Jennings, Bennettsville, for South Carolina; and Dr. W. C. Ashworth, Greensboro, for North Carolina. Dr. James M. Northington, Charlotte, N. C., was re-elected secretary-treasurer. Drs. Edwin P. Lehman, University, Va., Donnell B. Cobb, Goldsboro, N. C., and J. Warren White, Greenville, S. C., were elected councilors for a term of three years. Councilors holding over are: Drs. DeWitt Kluttz, Washington, N. C., J. H. Cannon, Charleston, S. C., and H. J. Langston, Danville, Va., for two years; and Drs. R. E. Seibels, Columbia, S. C., Dean B. Cole, Richmond, Va., and C. C. Orr, Asheville, N. C., for one year.

Medical College of Virginia News.

Dr. Louis Hamman, associate professor of medicine at Johns Hopkins University, Baltimore, as a visitor and guest of the Tri-State Medical Association, convening in Richmond, February 16th and 17th, gave a clinic at the Memorial Hospital of the Medical College of Virginia. This was attended not only by members of the association but by students of the junior and senior classes of the college, school of medicine. On February 17th, Dr. Hamman made ward rounds from nine to eleven with Dr. William B. Porter's section in medicine.

Thirty-three hundred ninety-four visits by patients to the outpatient clinic at the Medical College of Virginia for January sets a new record in volume of service. The largest previous January was in 1930 when 3,142 visits were made by patients for treatment.

Dr. William P. Gilmer, graduate of the school of medicine, class of 1916, Medical College of Virginia, and Mrs. Gilmer were at the college on January 19th. Doctor Gilmer is practicing at Clifton Forge, Va.

Virginian Honored.

Dr. T. Duckett Jones, who is head of the research department at the House of the Good Samaritan, in Boston, has been chosen to head an intensive research project on rheumatic fever, which is to begin in a few months. By next summer, it is expected, a newly erected addition to the hospital will be given over to this work. The object of this work is to seek the cause and cure of rheumatic fever, which leads to heart disease.

Dr. Jones is formerly of Petersburg, Va., and is the son of Dr. and Mrs. J. Bolling Jones of that city. He graduated in medicine at the University of Virginia in 1923. After serving as an interne and medical resident physician at the University for two years, he spent the following year at the Massachusetts General Hospital, Boston, as a cardiac resident physician under Dr. Paul Dudley White, well-known heart specialist. Dr. Jones next taught medicine at the University of Virginia and then became a National Research Fellow in Medicine, which took him to England for a year's work at the University Hospital in London, where he had the privilege of studying with Sir Thomas Lewis. In October, 1928, he became connected with the Good Samaritan Hospital, where he was made director of the research department.

The American College of Physicians

Is to convene in Baltimore, March 23rd for its fifteenth annual clinical session, which will continue in that city through March 27th, after which an additional day, March 28th, will be spent in Washington, D. C., where a special program of clinics and inspection tours has been arranged under the auspices of the Medical Departments of the U. S. Army, Navy and Public Health Service, and Georgetown University. The College is to meet in Baltimore upon the invitation of the medical colleges of that city, the State and local medical societies, various Baltimore hospitals and civic societies. Hotel headquarters will be at the Lord Baltimore Hotel, while the Alcazar, Cathedral and Madison Streets, will be general headquarters, at which will be the registration of members, commercial exhibits and general sessions. A special program of entertainment for visiting ladies has been arranged.

Dr. Sydney R. Miller, Baltimore, is President of the College, Dr. Maurice C. Pincoffs, also of Baltimore, general chairman.

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Requests for further information or programs should be addressed to the Executive Secretary, Mr. E. R. Loveland, 133-135 South 36th Street, Philadelphia.

News From University of Virginia, Department of Medicine.

At the meeting of the University of Virginia Medical Society, on January 26th, Dr. Oscar Swineford read a paper on "Pathological Physiology of Clinical Allergy," and Dr. Calvin T. Burton read a paper on "Avertin Anaesthesia."

On February 9th, Dr. B. P. Babkin, Research Professor of Physiology at McGill University, addressed the faculty and students of the School of Medicine on the subject of "Nervous and Humoral Control of Gastric Secretion."

On February 16th, Dr. John R. Caulk, Professor of Urological Surgery, at Washington University, St. Louis, spoke before the University of Virginia Medical Society on the subject of "Stone in the Bladder."

Dean J. C. Flippin attended the meeting of the Council on Medical Education and Hospitals in Chicago from February 16th to 18th.

Dean J. C. Flippin and Dr. L. T. Royster attended the White House Conference on Child Health and Protection on February 19th to 21st.

Dr. B. F. Cozart,

Of the class of 1930, Medical College of Virginia, has located in Reidsville, N. C., where he is engaged in general practice.

The Cooperative Clinic Tour of Europe,

Announcement of which appears in our advertising pages, promises one of the most pleasant ways for a summer vacation of fifty-eight days, for $895.00—a remarkably low figure for what is given. The itinerary has been prepared by Benjamin W. Van Riper, vice-president of the Travel Guild, the man who arranged the trip under Dr. Mayo in 1925, when several hundred physicians and their wives made up a similar party. And the ladies are wanted again on this trip.

Arrangements have been made for attendance upon a number of the most interesting medical and surgical clinics abroad. The crowd will be congenial and you will feel well repaid for the money spent. Any inquiries sent the MONTHLY office will have prompt attention.

Registered for Post-Graduate Course.

The following is a list of physicians, recently announced as registered for the Fifth Annual Spring Graduate Course in Ophthalmology, Otology, Rhinology, Laryngology, Facio-Maxillary Surgery, Oral Surgery, Bronchoscopy, and Esophagoscopy of the Gill Memorial Eye, Ear, and Throat Hospital, to be held March 23-29, 1931, at Roanoke, Va.

Dr. E. Vermillion, Welch, W. Va.
Dr. J. D. Williams, Ashland, Ky.
Dr. Chas. P. White, Wilmington, Del.
Dr. C. B. Wylie. Morgantown, W. Va.
Dr. W. M. Pierson, Wilmington, Del.
Dr. W. F. Elliott, Lincolnton, N. C.
Dr. E. C. Hart, Parkersburg, W. Va.
Dr. R. W. Petrie, Lenoir, N. C.
Dr. N. D. Harvey, Providence, R. I.
Dr. C. M. Sandusky, Jacksonville, Fla.
Dr. H. H. Veon, Parkersburg, W. Va.
Dr. J. R. Vermillion, Princeton, W. Va.
Dr. E. P. Odeneal, Gulfport, Miss.
Dr. W. J. Bristow, Columbia, S. C.
Dr. M. R. Mobley, Florence, S. C.

Celebration of Two Hundredth Anniversary of the Birth of George Washington.

All organizations and institutions of whatever character are urged to plan for a "George Washington Year" in 1932. This celebration will last from Washington's Birthday, February 22, 1932, to Thanksgiving Day, November 24, 1932.

The National George Washington Bicentennial Commission, Washington Building, Washington, D. C., will gladly send literature and suggestions for local programs to any committee, organization or group that will write for them.

Service to Our Readers.

The MONTHLY and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service which is absolutely free to you.

The Cooperative Bureau is equipped with catalogs and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in the MONTHLY and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages, but if they are not, we urge you to ask the MONTHLY about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Ill.

We want the MONTHLY to serve you.

Hospital for Treatment of Intestinal Ailments.

Through the beneficence of a group of public spirited citizens there has been established in New York City an institution which is unique in that it is to be particularly devoted to the diagnosis and treatment of intestinal diseases. At present there exists no other such institution in the entire United States. The building has just been completed and was officially opened with the new year. There will be facilities for colonic irrigations, and most of the modern electrical treatments now in use. The institution is to be known as the Montague Hospital for Intestinal Ailments. The equipment is thoroughly modern in every respect.

The Medical Director of the hospital is Dr. J. F. Montague, who occupies a position in the medical profession as an authority on intestinal ailments.

He is a member of the New York county and state medical associations and many other national medical societies.

The French National Committee for the Prevention of Blindness

Was recently organized in Paris. Its aims are similar to those of the American National Society for the Prevention of Blindness, through which organization this announcement was made. Mr. Carris, Managing Director of the latter, states that, "As in the United States, the scientific program in France will be directed along three main lines: (1) prevention of blindness from infectious diseases; (2) prevention of industrial eye accidents; and (3) conserving the remaining eyesight of visually handicapped school children.

"National groups, dedicated to the important task of conserving vision, probably will be established in a number of other countries within the next few years. Preliminary efforts toward this end are being stimulated by the International Association for Prevention of Blindness."

The presidency of the newly formed French Committee has been accepted by Dr. F. de Lapersonne, one of the most distinguished ophthalmologists in Europe, who is also professor emeritus of the University of Paris, and president of the International Association for Prevention of Blindness. Other members of the Committee include thirty of the best known leaders in social work and public health in France.

Dr. Stanton K. Livingston,

Of the class of '25, University of Virginia, Department of Medicine, recently located in Washington, D. C., is taking up special work in osteomyelitis during the winter at Hines Hospital, Hines, Ill., but plans to return to Washington in July.

Commander Micajah Boland, M. C., U. S. Navy,

A member of the Medical Society of Virginia and formerly stationed in Virginia waters, is now District Medical Officer, ninth Naval District, which includes thirteen states of the Middle West, and is also senior medical officer of the Naval Training Station at Great Lakes, Illinois.

New York Post-Graduate Medical School and Hospital Unites With Columbia University.

The incorporation in the educational system of Columbia University of the New York Post-Graduate Medical School and Hospital, after nearly fifty years as an independent institution, was recently announced. The agreement between the two institutions will be effective July 1, 1931. Dr. Arthur F. Chace, president of the New York Post-Graduate Medical School and Hospital, stated that this would make the Post-Graduate an integral part of the Columbia University teaching system and, in the future, the center of a comprehensive program of post-graduate medical teaching sponsored by Columbia.

It is interesting to note that during the forty-eight years of its existence, 27,324 physicians have received instruction at the Post-Graduate School.

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Dr. Guy Hinsdale,

Medical Director of White Sulphur Springs, W. Va., has returned from a three months' visit to London and Paris.

The American Journal of Cancer

Made its first appearance in January, 1931. It will be not merely a continuation of the former *Journal of Cancer Research*, but will represent a far wider field. One of the important new features of the journal will be a complete abstract service covering the subject of cancer in all its phases and relationships. Dr. Francis Carter Wood, as editor, has associated with himself an editorial staff of prominent physicians from the various specialties. The journal is the official organ of the American Association for Cancer Reserach and The American Society for the Control of Cancer. It will appear quarterly—January, April, July and October—at the subscription price of $5.00 a year. The business office is 654 Madison Avenue, New York City.

Dr. J. McCaw Tompkins,

Richmond, was recently re-elected vice-president of the Westmoreland Club of this city, for the ensuing year.

Dr. Susan Wilson Field,

Of State Teachers College, Farmville, Va., returned recently from an interesting visit to the Mayo Clinic, Rochester, Minn.

Dr. Allen F. Voshell,

University, Va., has been elected a member of the executive committee of the 1932 lacrosse committee for the Olympic games at Los Angeles.

Patients Unharmed in Sanatorium Fire.

Flames starting around an overheated furnace swept through the basement and first floor of the main building at Mount Regis Sanatorium, near Salem, Va., in the early morning of February 23rd. The patients were transferred to other buildings and no one was injured, but the damage to the building by fire and water was estimated at about $10,000. Work of repairing the building will be started at once.

The Radiology Society of North Carolina

Was organized at Durham, N. C., in February, and the following were elected officers for the ensuing year: President, Dr. J. K. Pepper, Winston-Salem; vice-president, Dr. W. T. Rainey, Fayetteville; and secretary-treasurer, Dr. Major I. Fleming, Rocky Mount.

Dr. A. M. Showalter,

Christiansburg, Va., was elected grand master of the grand lodge, A. F. and A. M. of Virginia, at the closing session of the 153rd annual communication of the grand lodge in Richmond, in February.

Dr. William Edward Fitch,

For several years at Buffalo Lithia Springs, Va., and recently medical director for the Bedford Springs Hotel and Baths at Bedford Springs, Pa., has recently accepted the position as consulting medical hydrologist and medical director of the French Lick Spa, French Lick, Ind.

The National Council to Move to Larger Offices.

Owing to the expansion of the National Health Council's work and the development of its numerous activities, it has become necessary for that organization to secure larger office quarters. So the headquarters of the Council and those of nine of its constituent members will be moved, April 1st, from 370 Seventh Avenue, its home since its organization in 1921, to the new Nelson Tower Building, 450 Seventh Avenue.

The National Health Council and its member organizations which will occupy the 11th to the 15th floors inclusive are: American Child Health Association, American Heart Association, American Public Health Association, American Social Hygiene Association, National Committee for Mental Hygiene, National Organization for Public Health Nursing, National Society for the Prevention of Blindness, National Tuberculosis Association, and Foundation for Positive Health.

Married.

Dr. Nelson Mercer, Richmond, Va., and Miss Jeannette Bahn, of Maryland, in Washington, D. C., December 8th.

Dr. Caleb S. Stone, Farmville, Va, and Miss Margaret S. Carter, University, Va., January 31st.

Dr. William E. Chapin, Richmond, Va., and Miss Nancy Berry, of Prince George County, Va., recently.

Dr. William Latimer Cooke, of the class of '29, Medical College of Virginia, and Miss Sally Ann Boxley, Roanoke, Va., February 10th. They are living at Beckley, W. Va.

Dr. John Randolph Tucker, class of '28, Medical College of Virginia, and Miss Florence Clifton Saunders, both of Williamsburg, Va., February 14th.

The Annual Report of the Gorgas Memorial Institute

Shows that the Institute has not only maintained its program of health education but has watched with satisfaction a growth in certain aspects of it. Some of their accomplishments are: a most successful Second Annual Gorgas Essay Contest; a continued demand for the Mosquito Control advice; increased interest in the health service to newspapers and classrooms; and last, and perhaps most important, an inspirational year of achievement in scientific research in the Gorgas Memorial Laboratory in Panama. Dr. Cary T. Grayson is President, and Dr. Franklin Martin, Chairman of the Board, of the Institute.

For a detailed summary of the work of the Gorgas Memorial Laboratory, write to the Gorgas Memorial Institute, 1331-3 G St., N. W., Washington, D. C.

Dr. Thomas R. Boggs,

Baltimore, Md., addressed the Lynchburg and Campbell County (Va.) Medical Society on February the 2nd, on the subject of Pneumonia. The meeting was well attended and the paper was excellent.

The Southwestern Virginia Medical Society

Will hold its semi-annual meeting at Wytheville, on March 18th and 19th. Invited guests for the meeting are Dr. John A. Kolmer, of Philadelphia, and Drs. D. C. Smith and John A. Hornsby, of University, Va. Other interesting papers will also be presented. Dr. E. G. Gill, Roanoke, is president, Dr. E. M. Chitwood, Wytheville, vice-president, and Dr. A. M. Showalter, Christiansburg, secretary.

Dr. R. D. Bates,

Newtown, Va., was re-elected president of the board of directors of the Bank of Essex, Tappahannock, Va., at the annual meeting held recently.

Officers of Winchester (Va.) Hospital.

At a meeting of the medical staff of the Winchester Memorial Hospital, early in February, Dr. Robert M. Glass, Winchester, was elected president, succeeding Dr. Hunter H. McGuire after a service of nearly thirty years, or since the organization of the hospital. Dr. Charles R. Anderson, Winchester, was elected vice-president, and Dr. J. E. Harris, also of Winchester, was re-elected secretary-treasurer.

Civil Service Examinations.

The U. S. Civil Service Commission, Washington, D. C., announces open competitive examinations for the following positions, applications to be rated as received until June 30th: Medical officer, associate medical officer and assistant medical officer in general medicine and surgery; chief nurse and head nurse for Indian Service, and graduate nurse and graduate nurse, visiting duty, for various services.

Dr. Frank Hancock,

Norfolk, Va., has resigned as health commissioner for Norfolk, which place he took when Dr. P. S. Schenck was forced to give up the work on account of his health. Dr. J. Jett McCormick has been appointed in Dr. Hancock's place.

Major Benjamin B. Warriner, M. C., U. S. A.,

After a service at Langley Field, Hampton, Va., has been transferred to the School of Aviation Medicine at Brooks Field, Texas.

Two Virginians Graduate From Army Medical School.

Two Virginians were among those who graduated from the Army Medical School, Washington, D. C., the last of January. They are Lieutenant Charles L. Baird, of Buckingham County, and Lieutenant Samuel L. Cooke, of Pittsylvania County. Both were graduated from the Medical College of Virginia, Richmond, in 1929.

The Most Healthful Year on Record in New York.

The New York State Department of Health announces that never in the fifty years of existence has the health of the people of New York State been better than in 1930. This statement is based on figures compiled by the Division of Vital Statistics of the Department of Health. The total number of deaths last year was almost 7,000 less than in 1929, there were fewer deaths from the important diseases of childhood, and the infant mortality was the lowest on record. New minimum death rates were established for tuberculosis and maternal mortality was exceptionally

low. Diseases of the heart though still at the head of the mortality list, caused fewer deaths than in 1929, also 1928, and 1926.

Interesting Figures Regarding Hospitals.

Dr. Paul H. Fesler, superintendent of University of Minnesota Hospitals and president-elect of the American Hospital Association, recently gave a most interesting radio talk on hospitals, under the auspices of the President's Emergency Committee for Employment. Among the points brought out are that hospitals rank as the fifth industry in the country from the point of view of capital invested; that one out of ten of our population of 120,000,000 uses the hospital each year; that there are 7,000 hospitals in this country containing 900,000 beds, representing an investment of more than three billion dollars. Statistics show that more than half of our hospital beds are in mental institutions, most of which are over-crowded. While there is a surplus of hospital beds in certain centers of the 3,078 counties in the United States, there are only 479 county hospitals. Mr. Fesler cited the need for psychopathic hospitals in some states, for additional facilities for tuberculous patients and the remodeling of some of the institutions now used for this class, hospitals for the convalescent and chronic patient, and greater hospital facilities for crippled children in many states. He suggests that now is the time for building and remodeling programs wherever desirable and necessary, while the cost of material is low and labor plentiful.

Dr. E. N. Lillard,

Recently at Nokesville, Va., announces his removal to Sperryville, Va.

Dr. Horsley to be Honored.

It is announced that Dr. John Shelton Horsley, Richmond, Va., distinguished surgeon of this State, will be awarded the degree of doctor of laws by the University of Richmond, at its commencement exercises in June. It is stated that he was selected principally because of his contribution to the science of surgery, and we feel that it is a well deserved honor.

Doctors Suffer Losses From Fire.

As a result of the big fire at Hillsville, Va., in the early morning of January the 29th, large losses were sustained by Dr. C. B. Nuckolls in the loss of his drug store, and by Drs. John A. Tipton, W. R. Gardner, and J. Glenn Cox in the loss of their offices, records and equipment.

Dr. Edward W. Gray,

Richmond, Va., of the class of '26, Medical College of Virginia, after practicing for several years in this city, has accepted a position with the Hospital of the E. I. Du Pont de Nemours Company at Carney's Point, N. J.

Dr. Thomas C. Lawford,

Of the class of '29, University of Virginia, Department of Medicine, upon completing his internship at the Orange Memorial Hospital, Orange, N. J., joined the staff of Elizabeth Buxton Hospital, Newport News, Va.

Schools for Mothers in Foreign Countries.

In Breslau all mothers subject to sickness insurance, and in Cologne mothers-to-be receiving unemployment benefits, must attend a mothers school where they are taught how to care for their children. Recently a school for teaching mothers the proper care of their children, particularly the babies, was established in Vienna, and another in the City of Rosario de Santa Fe, Argentina.

For Rent—

Doctor's office on first floor of Piedmont Apartment Building, Culpeper, Va. Splendid opening. Apply to Box 336, Culpeper, Va. (*Adv.*)

Obituary Record

Dr. Aaron Kemper Gilmer,

Lebanon, Va., died at the hospital in Abingdon, Va., February 18th, death being due to heart trouble and pneumonia. He was born September 23, 1873, and graduated from the Medical College of Virginia in 1896. He was a member of the Russell County Medical Society and was a true representative of the old family physician who devoted his life to the alleviation of the suffering of humanity. He is survived by his wife and three children.

S. C. C.

Dr. James Nimmo Ellis,

Former Virginian and for some years a prominent physician of Atlanta, Ga., died February 11th, after an illness of nearly a year. He was sixty-seven years of age and a graduate of the Medical College of Virginia in the class of 1889. He is survived by two brothers and a sister, his wife having died several years ago.